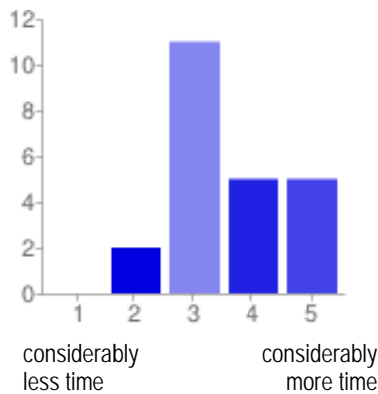


## Section 1: Overall Course Set-up

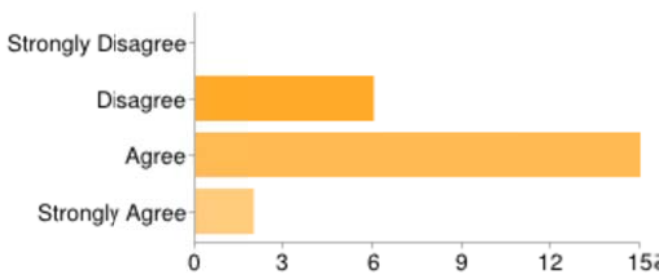
1. Estimate how much time you spent on this course overall, compared to the number of credits given.



1 - considerably less time	0	0%
2	2	9%
3	11	48%
4	5	22%
5 - considerably more time	5	22%

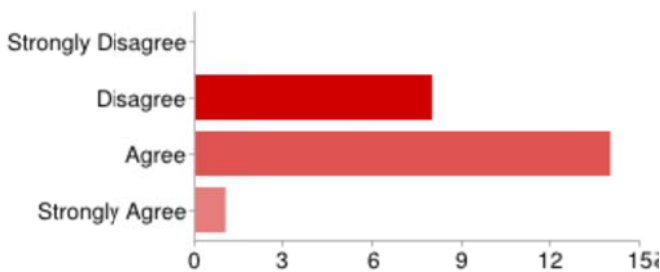
2. The stated learning goals for the course ...

2a) ... corresponded well to the course content.



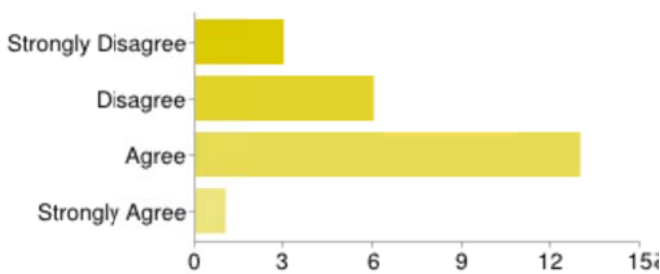
Strongly Disagree	0	0%
Disagree	6	26%
Agree	15	65%
Strongly Agree	2	9%

2b) ... were well supported by the course material and handouts.



Strongly Disagree	0	0%
Disagree	8	35%
Agree	14	61%
Strongly Agree	1	4%

2c) ... were well supported by the way the course was organised.



Strongly Disagree	3	13%
Disagree	6	26%
Agree	13	57%
Strongly Agree	1	4%

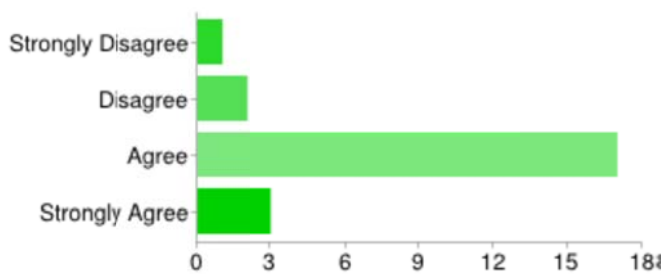
## 2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

[as at 2014.06.12]

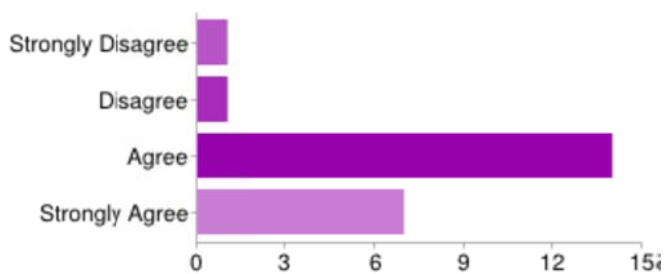
### 3. The lab exercises ...

3a) ... were relevant to the course and improved my understanding.



Strongly Disagree	1	4%
Disagree	2	9%
Agree	17	74%
Strongly Agree	3	13%

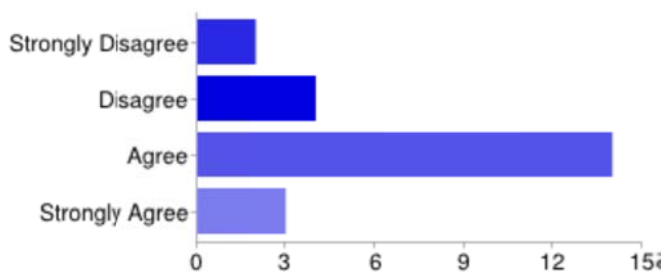
3b) ... were in pace with the teaching material.



Strongly Disagree	1	4%
Disagree	1	4%
Agree	14	61%
Strongly Agree	7	30%

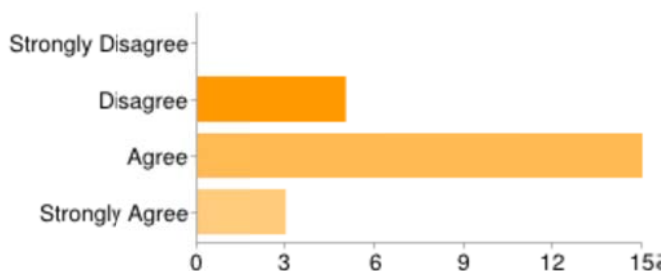
### 4. The course ... -

4a) ... had a reasonable workload.



Strongly Disagree	2	9%
Disagree	4	17%
Agree	14	61%
Strongly Agree	3	13%

4b) ... was intellectually challenging.



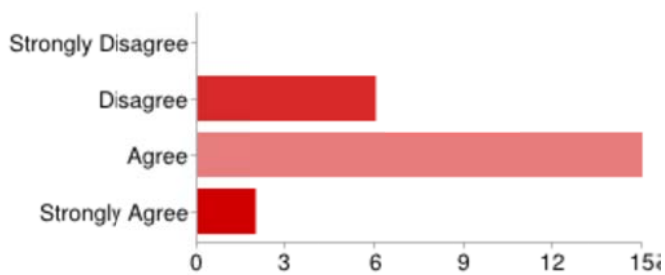
Strongly Disagree	0	0%
Disagree	5	22%
Agree	15	65%
Strongly Agree	3	13%

## 2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

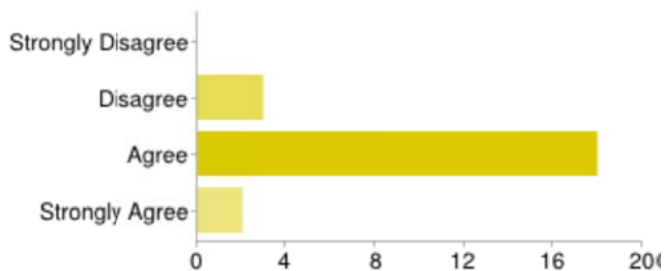
[as at 2014.06.12]

4c) ... has developed my problem-solving skills.



Strongly Disagree	0	0%
Disagree	6	26%
Agree	15	65%
Strongly Agree	2	9%

4. The course ... - 4d) ... has sharpened my analytical abilities.



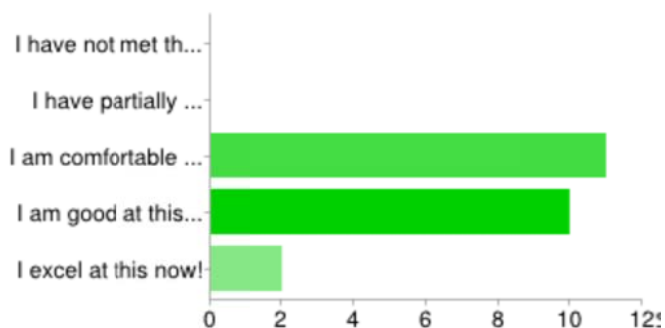
Strongly Disagree	0	0%
Disagree	3	13%
Agree	18	78%
Strongly Agree	2	9%

### Section 2a: Course-specific Learning Objectives

Based on the learning objectives laid out in the Course Plan, please choose the option that best describes YOUR accomplishment of each objective.

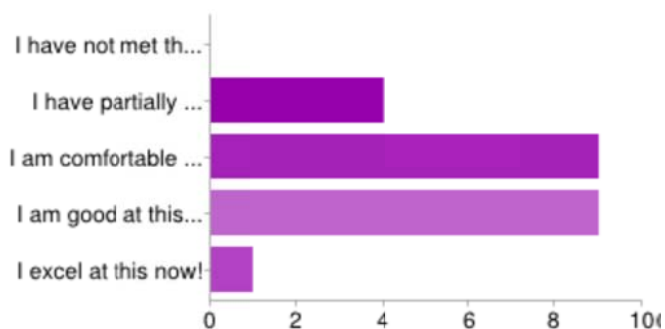
5. After completing this course, I find that ...

5a) I can apply knowledge and skills from earlier courses, as well as learn to acquire new ones on demand.



I have not met this objective	0	0%
I have partially met this objective	0	0%
I am comfortable with this now	11	48%
I am good at this now	10	43%
I excel at this now!	2	9%

5b) I have learned to get organised, manage, lead and become part of a cross technical and complex development project.



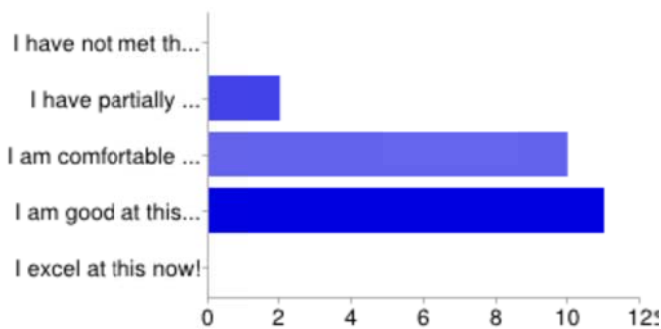
I have not met this objective	0	0%
I have partially met this objective	4	17%
I am comfortable with this now	9	39%
I am good at this now	9	39%
I excel at this now!	1	4%

2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

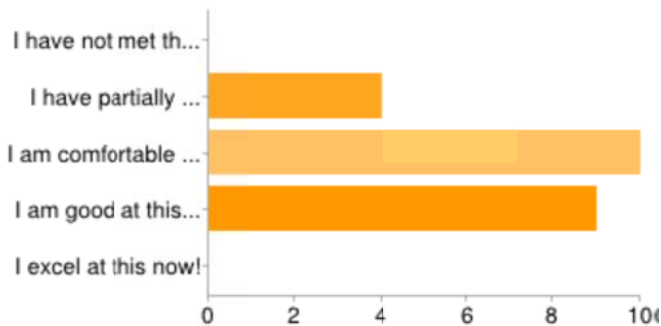
[as at 2014.06.12]

5c) I can identify, compare and critically assess aspects of an engineering problem, towards making design decisions.



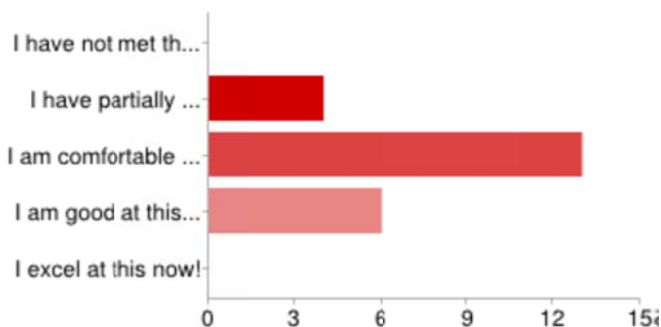
I have not met this objective	0	0%
I have partially met this objective	2	9%
I am comfortable with this now	10	43%
I am good at this now	11	48%
I excel at this now!	0	0%

5d) I can describe, compare and critically examine various product development processes and their properties.



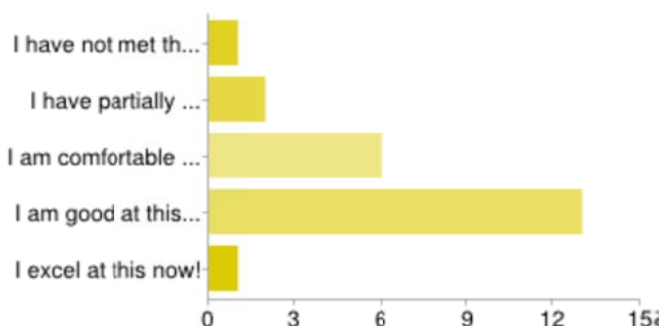
I have not met this objective	0	0%
I have partially met this objective	4	17%
I am comfortable with this now	10	43%
I am good at this now	9	39%
I excel at this now!	0	0%

5e) I am able to apply and evaluate support methods in complex product development.



I have not met this objective	0	0%
I have partially met this objective	4	17%
I am comfortable with this now	13	57%
I am good at this now	6	26%
I excel at this now!	0	0%

5f) I have good knowledge and skill in modelling, simulation and visualization of dynamic products and systems.



I have not met this objective	1	4%
I have partially met this objective	2	9%
I am comfortable with this now	6	26%
I am good at this now	13	57%
I excel at this now!	1	4%

2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

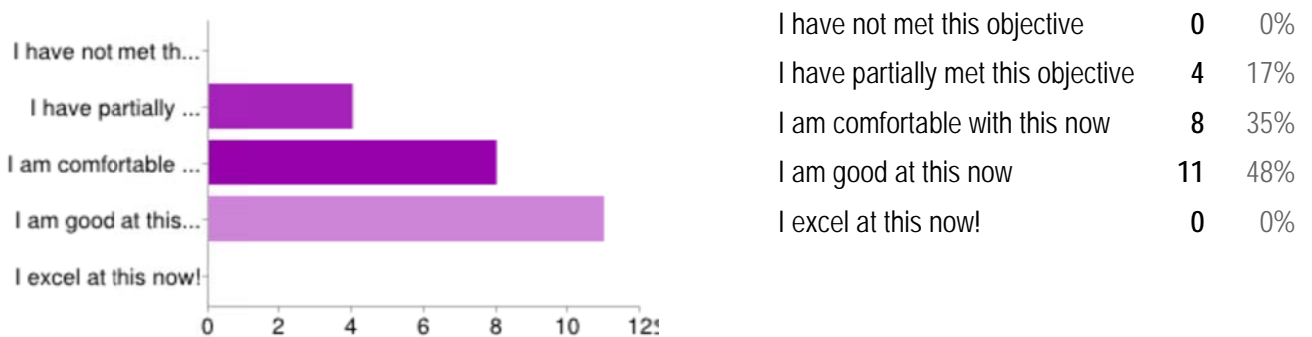
23 / 36 Students Responded

[as at 2014.06.12]

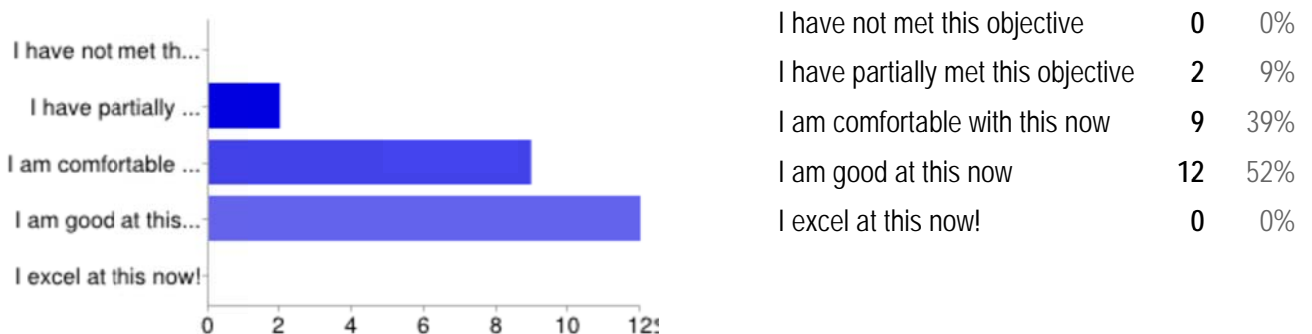
5g) I have good knowledge and skill in methods and tools for co-design and optimization of mechatronic systems.



5h) I can use professional tools and processes necessary for the development of mechatronics products.



5i) I know how to apply a Model-based development approach to mechatronics product development.



5j) I have good knowledge and skill in designing and implementing prototypes.

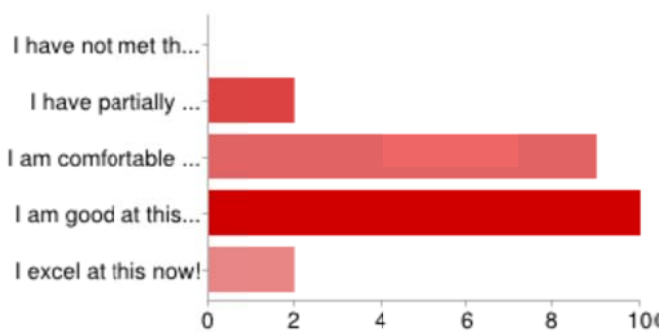


## 2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

[as at 2014.06.12]

5k) I can apply fundamental requirements management and test processes.



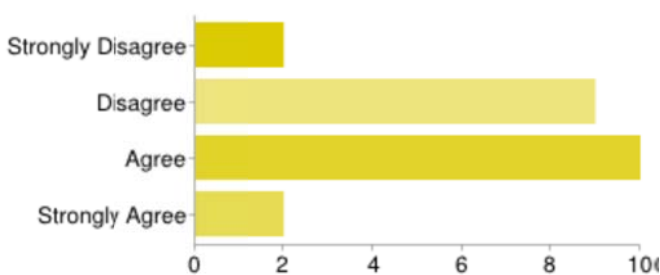
I have not met this objective	0	0%
I have partially met this objective	2	9%
I am comfortable with this now	9	39%
I am good at this now	10	43%
I excel at this now!	2	9%

### Section 2b: Relevance of Course Content

The course consisted of 3 components (a) a seminar series (b) project work & (c) in-depth research. The following section covers each of these parts.

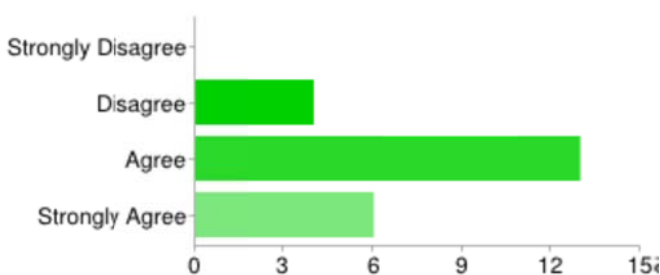
6. The Seminar Series supported the learning objectives and contributed to my overall education.

6a) Kick-off Workshop



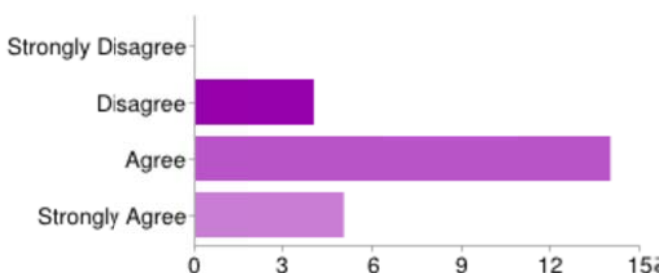
Strongly Disagree	2	9%
Disagree	9	39%
Agree	10	43%
Strongly Agree	2	9%

6b) Project Management



Strongly Disagree	0	0%
Disagree	4	17%
Agree	13	57%
Strongly Agree	6	26%

6c) Product Development Processes



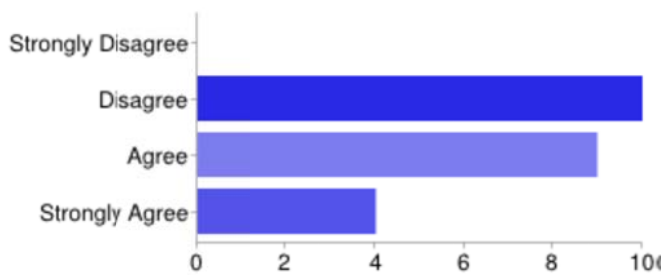
Strongly Disagree	0	0%
Disagree	4	17%
Agree	14	61%
Strongly Agree	5	22%

## 2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

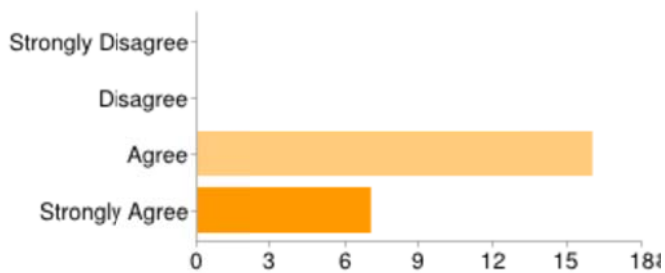
[as at 2014.06.12]

### 6d) Lean Development: History, examples and its application



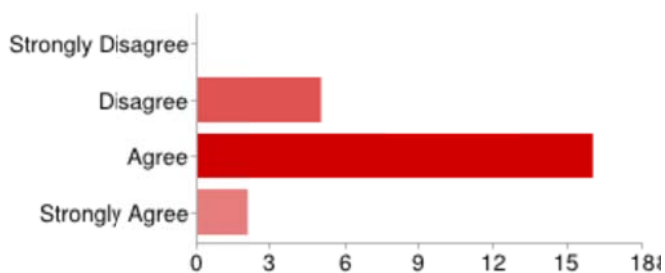
Strongly Disagree	0	0%
Disagree	10	43%
Agree	9	39%
Strongly Agree	4	17%

### 6e) Requirements Engineering



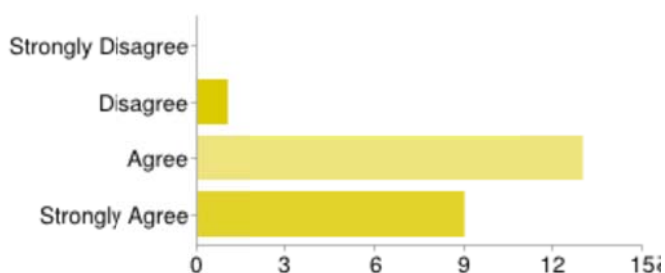
Strongly Disagree	0	0%
Disagree	0	0%
Agree	16	70%
Strongly Agree	7	30%

### 6f) Mechatronics Engineering: Experiences from earlier projects



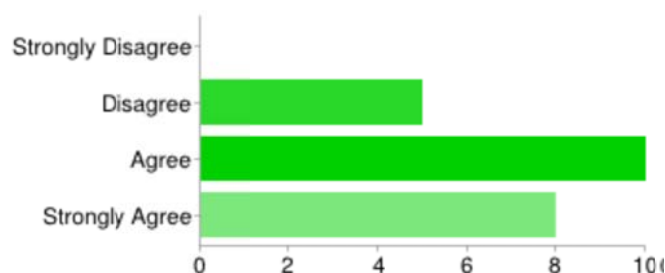
Strongly Disagree	0	0%
Disagree	5	22%
Agree	16	70%
Strongly Agree	2	9%

### 6g) Verification, Validation & Testing



Strongly Disagree	0	0%
Disagree	1	4%
Agree	13	57%
Strongly Agree	9	39%

### 6h) Diversity and Inclusion in Organization



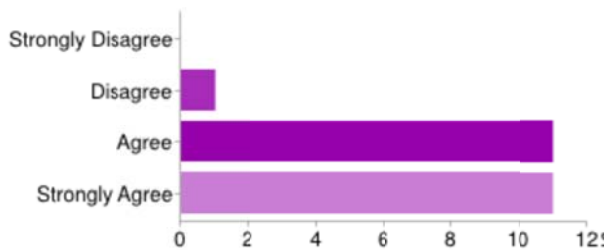
Strongly Disagree	0	0%
Disagree	5	22%
Agree	10	43%
Strongly Agree	8	35%

## 2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

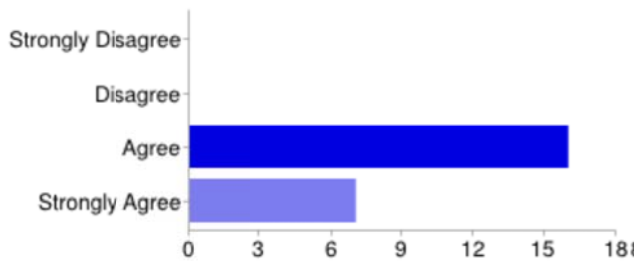
[as at 2014.06.12]

### 6i) Embedded Systems Testing at Scania (study visit)



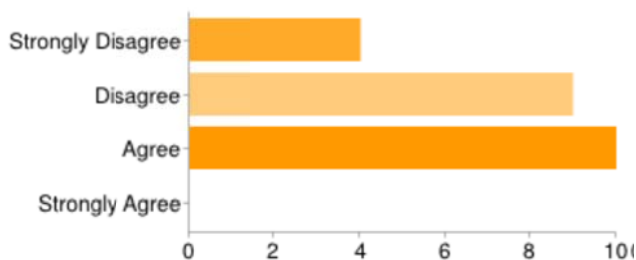
Response	Count	Percentage
Strongly Disagree	0	0%
Disagree	1	4%
Agree	11	48%
Strongly Agree	11	48%

### 6j) Document Management



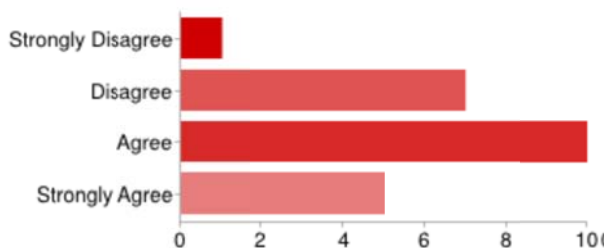
Response	Count	Percentage
Strongly Disagree	0	0%
Disagree	0	0%
Agree	16	70%
Strongly Agree	7	30%

### 6k) Life-cycle Thinking in Product Development



Response	Count	Percentage
Strongly Disagree	4	17%
Disagree	9	39%
Agree	10	43%
Strongly Agree	0	0%

### 6l) Project Management in Practice (ÅF study visit)



Response	Count	Percentage
Strongly Disagree	1	4%
Disagree	7	30%
Agree	10	43%
Strongly Agree	5	22%

## 7. Any comments or suggestions on how the Seminar Series could be improved? (format, missing topics, etc.)

6k) have already have exactly (nearly) this session earlier (mechanical track) and the main part of all my classmates also have had it. Would be better with one half of the lecture before lunch and the other after lunch. The sessions are long and its hard to focus towards the last hour.

\* I don't really remember enough about 6a-6d to say whether they were useful or not. \* The seminars were very good, long enough and covered the basics of every subject very well.

6h was very very useful to me

Not able to judge on Seminar Series. Form says "Was not part of it"

\* Some of the sessions were very long (4 hours) when less would have sufficed. \* Actual use of reading material and maybe a small quiz half way through P3 would've been good.

I think you should have a workshop in command line svn since many people uses os x or some other unix based OS.

Better LCA and more concrete lean subject, even though this subject is quite unclear

Not have 4-hour lectures - it is too long



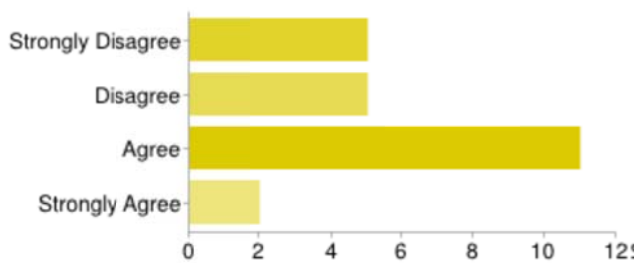
2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

[as at 2014.06.12]

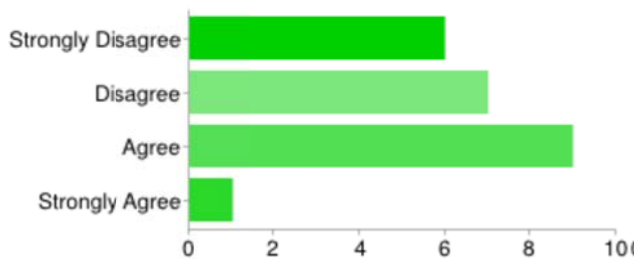
8. During the PROJECT WORK of P4, I found that ...

8a) Teachers were responsive to our needs and questions.



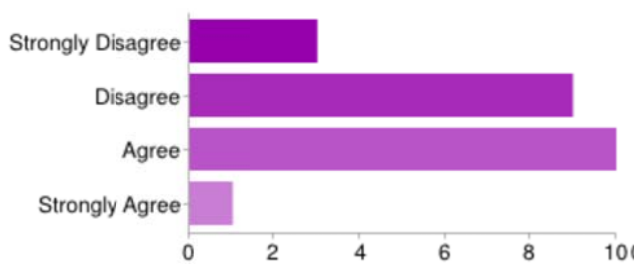
Strongly Disagree	5	22%
Disagree	5	22%
Agree	11	48%
Strongly Agree	2	9%

8b) Teaching team were consistent with their feedback & instructions (during design reviews, project meetings, etc.)



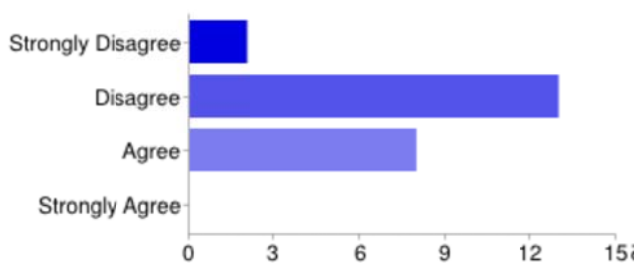
Strongly Disagree	6	26%
Disagree	7	30%
Agree	9	39%
Strongly Agree	1	4%

8c) Communication of deadlines has been clear.



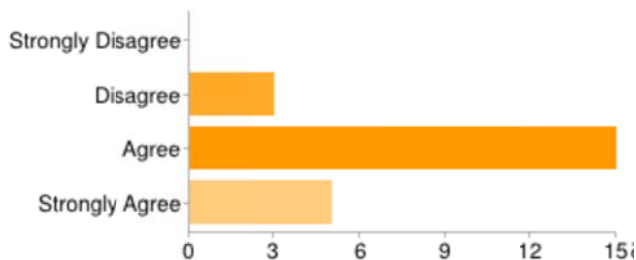
Strongly Disagree	3	13%
Disagree	9	39%
Agree	10	43%
Strongly Agree	1	4%

8d) Communication of what is expected to achieve our goals has been clear.



Strongly Disagree	2	9%
Disagree	13	57%
Agree	8	35%
Strongly Agree	0	0%

8e) The project work supported the learning objectives and contributed to my overall education.



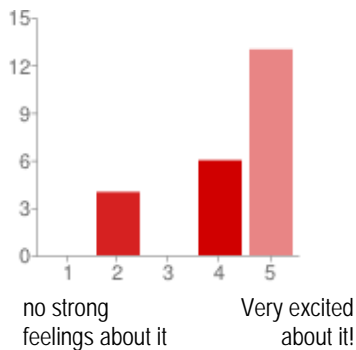
Strongly Disagree	0	0%
Disagree	3	13%
Agree	15	65%
Strongly Agree	5	22%

## 2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

[as at 2014.06.12]

### 9a) I am looking forward to continuing the project work in the Autumn (in course MF2059)



1 - no strong feelings about it	0	0%
2	4	17%
3	0	0%
4	6	26%
5 - Very excited about it!	13	57%

### 9b) I think the P4 project work could have been better if...

- \* If there had been one Social page with all deadlines of the Spring (and not in any slide in some earlier power point)
- \* More focus on that the final deliverables should be to help us in the fall instead of what the Course Leader wants
- \* More clear deadlines \* Format of deliverables, especially the final reports and SOTA

The clashes with EcoCar were very bad, and this course has suffered a lot, especially the report that we didn't have enough time to write since we worked 60 hours/week with EcoCar the final weeks. I think this could have been dealt with much better, since the clashes has occurred before...

- \* A different teacher had managed the course. \* All teachers were informed about the projects. \* Deadlines set at 23.59 not 09.00.
- \* The Course Leader gave at least some positive criticism, not only negative. It makes it difficult to use and adapt to the criticism if it is only negative. \* The Course Leader had at least tried to solve the EcoCar issue. \* The instructions for SOTA, Report, In-Depth etc were all more clear. \* If we had been treated as adults instead of as children. i.e. not allowing people that travelled by bus (EcoCar) to present, etc.

- \* The things expected of the in-depth final report was very vague. \* I also feel like the guidelines for the SOTA report was lacking and much was expected of us where a lot had to be interpreted by the students.

- \* Make sure the companies are ready-to-go with all the information. \* Be consistent with info and help.

The teachers would have been better to present deadlines and what is expected.

if the details about the project was understood by the teaching team

I think there could have been a more positive attitude in the emails. I didn't get the expression that the teachers were exciting about having this course with us. More that "this is something we have to do"...

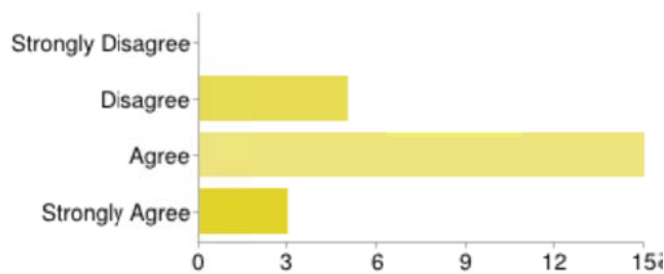
Not so much trash for taking the Eco Cars course since we learnt a lot about project work in that with the theory from the HK-course, it was a perfect place to try it in practise. For example Learning Objectives 5 b and 5c were "partially met" for HK but "I excel at this now" for Eco Cars! \* Also I think the Eco Cars course should become mandatory for mechatronic students and to make it work in symbiosis with the HK course. \* Also I think it should not be so much administrative assignments and deliverables in the HK since these block the actual project work.

Better instructions - for example, what to bring for the design review

Thanks to the Eco Cars course, I can say "I excel at this now" to the HK learning objectives 5b and 5c

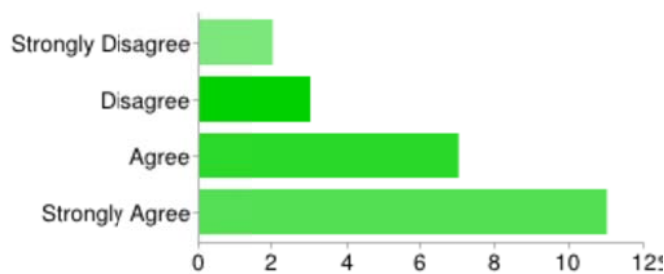
10. During the IN-DEPTH RESEARCH work of P4, I found that ... -

10a) My work on this topic supported the learning objectives and contributed to my overall education.



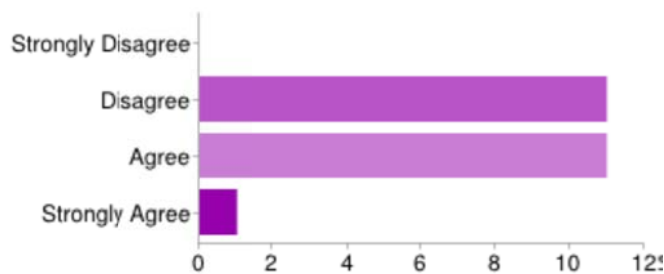
Strongly Disagree	0	0%
Disagree	5	22%
Agree	15	65%
Strongly Agree	3	13%

10b) The topic of my in-depth research was relevant to my project work.



Strongly Disagree	2	9%
Disagree	3	13%
Agree	7	30%
Strongly Agree	11	48%

10c) The format of the in-depth research work was helpful to my own learning.



Strongly Disagree	0	0%
Disagree	11	48%
Agree	11	48%
Strongly Agree	1	4%

10d) I think the P4 in-depth research could have been better if...

It did not feel too relevant. I learned the most important things during the first lecture part of the course.

Even though we had a problem / task description, it was a bit unclear and there was some question marks about what to deliver. Maybe revise it.

I thought the in-depth study was necessary, but a bit unclear what the teachers expected from us.

\* It was removed / changed. \* It was focused more on the project. \* LCA was removed.

The communication between teachers and students were better.

Too little time to make something good

It is more clear that it is the focus on the subject itself that is the important part - not the application on our own project.

LCA is removed (I had 'Requirements')

Not able to judge on in-depth research. "Was not part of it"

I didn't like the in-depth project

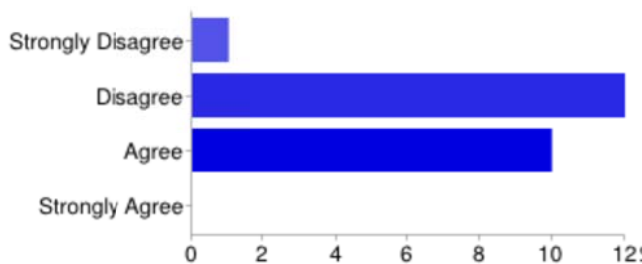
I think the in-depth should be excluded, and the 1.5 credit should be included in the project. I think most of the people thought that the project felt more like 4.5 credits.

... if it was removed - at least diversity. I understand that project management and requirements are needed since they need to be done anyway. I also understood the thought behind diversity but it disturbs the actual project work.

### Section 3: Your Thoughts on this Course

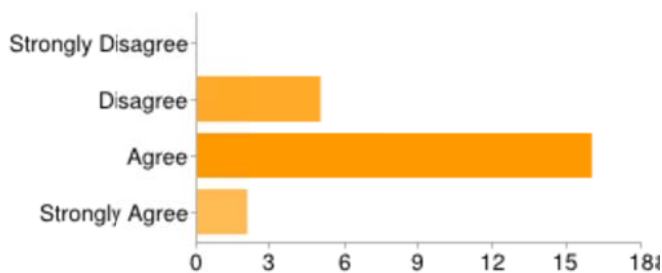
Looking back over the course as a whole, please rate your feelings on the following statements.

11a) I received a lot of valuable feedback on my progress and achievements.



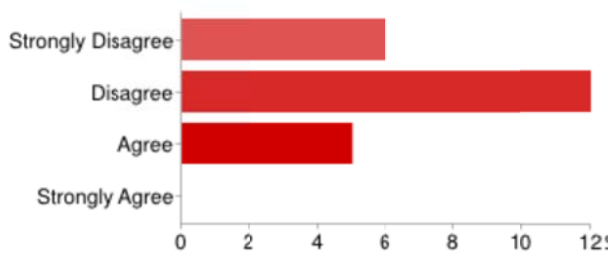
Strongly Disagree	1	4%
Disagree	12	52%
Agree	10	43%
Strongly Agree	0	0%

11b) The course has made me feel more confident about tackling new and unfamiliar problems.



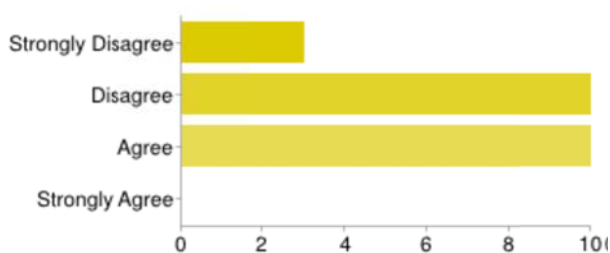
Strongly Disagree	0	0%
Disagree	5	22%
Agree	16	70%
Strongly Agree	2	9%

11c) It was always clear what was expected of me in this course.



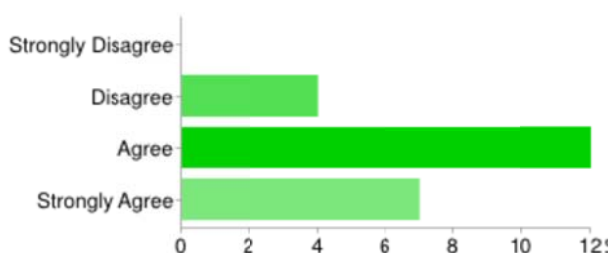
Strongly Disagree	6	26%
Disagree	12	52%
Agree	5	22%
Strongly Agree	0	0%

11d) The staff made a real effort to understand the problems and difficulties we faced in this course.



Strongly Disagree	3	13%
Disagree	10	43%
Agree	10	43%
Strongly Agree	0	0%

11e) I feel this course has contributed to my overall education.



Strongly Disagree	0	0%
Disagree	4	17%
Agree	12	52%
Strongly Agree	7	30%

## 2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

[as at 2014.06.12]

### 12a) What did you like MOST about the course?

Our project! very happy with it.

Study visits. And lots of free work and planning in the project work

Really fun to solve a "real" problem for a company,

Organising the project

The diversity seminars were excellent. The seminars in general were very good.

The topic of our project.

Document Management

The seminars with experts on the topics

Company interactions

The fact that there is allocated time for the early parts of the project instead of starting with solving the project problem right away.

The industrial context.

That you work with a real project from a real company

To work with a "real project"

having opportunity to work in a large group and also in collaboration with a company

Group work in P4

That we had to take responsibility

The actual project and to meet the company and work for a real company

### 12b) What did you like LEAST about the course?

The unclear expectations and deadlines sometimes. And the in-depth research.

\* Too long sessions (for the seminars) \* Unorganised HK room (so far)

Clashes with EcoCar.

The negative look on the EcoCar project that the teachers had.

\* The administration, management and overall instructions. \* Very unclear and negative communication from some of the teachers mostly through email. \* The negative view of EcoCar

How the HK and EcoCar course was handled by the teachers.

In-Depth research

Too focused on strict deliverables for this period and not on final goal for December

Unprofessional conduct from teachers regarding EcoCar

\* A lot of information about what was expected of us was unclear or conflicting. \* The design reviews gave feedback which was necessary but also gave a lot of conflicting feedback.

Lack of organisation from the company.

That it crashed a lot with the EcoCars course

The examination

The project could have been interesting if the administration wasn't terrible

in-depth research

The attitude from the teacher(s).

The fighting about Eco Cars. It was handled in a very unprofessional way

I wanted to get all the information in the beginning and all the important dates. Also what to deliver. And all the material so you can plan. I did not like that it wasn't like this now.

## 2013/14 - Course Evaluation: MF2058 (Mechatronics Advanced Course (Part I))

23 / 36 Students Responded

[as at 2014.06.12]

If you have extra comments for Section 3, please add them here.

\* Inform students about the Eco Cars course and tell them to not take them at the same time. \* Announce extra clearly the important dates already in the beginning of the course to make it easier for students to choose voluntary courses.

It was a good course for learning about project work, and will probably help me when working with the HK project in the fall.

EcoCar is a fantastic course. We got to use our skills from previous courses and be part of a large project. However, it became such a taboo and negative topic due to the childish behaviour of the Course Leader. He made jokes and ridiculed the EcoCar course. It made a lot of students feel guilty for taking the course - a course that everyone learned \_A LOT\_ from!

By being more read-up on the project situation, I feel that more helpful feedback for the project may be given in the design reviews.

\* The entire project has been spent trying to handle administrative issues with a very unclear scope and a teaching team which says the opposite to what the company / project owner says! \* Next time, be sure that you know what the project is about before it starts!

No emails on Saturday nights!!!