

# Saving costs on tutorial education

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## Introduction

Given the upcoming budget cuts by the Dutch government, our School needs to economize. Per academic year, we spend about 1.5 – 1.8 million euro on tutorial education in B1 and B2 of our bachelor programs. The management team has set the goal of saving 500K on our tutorial education. Half of this cost reduction can be achieved by using HOKA (BAO) funds for our tutorial education instead of regular first money stream funds. The targeted reduction in spending is thus 250K. We have explored various options to realise this. An earlier version of this document was discussed with the Education Committee of the School Council. The options that were deemed viable and we would thus like to implement, are further described below.

Regarding options 1 and 2, we propose that at the start of the new academic year we will talk to all Bachelor-1 and -2 lecturers to discuss these options for reducing tutorial hours offered and to determine if and how they can be implemented. We are hopeful that, together with the other proposed measures, sufficiently many lecturers are cooperative to achieve the targeted cost reduction. In our view, there are sufficient courses where small scale education and opportunities for practicing can be organised more efficiently while achieving the same or even better outcomes for students. In this way, we hope to prevent having to impose more stringent measures.

## Summary of the viable options

| Option                                                                                                                                                                                                                                                                                            | Earliest implementation                                                                                                                                                                                     | Estimated cost saving | Impact education     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|----------------------|
| 1. Decrease number of tutorials. More specifically, investigate for which courses it might be feasible to restrict the number of tutorials to 1 per week. This way, students can still benefit from small scale tutorial education but we save on the number of tutorials that need to be taught. | 2026-2027<br>Lecturers will need time to restructure their courses and with the reduction in the size of the L&I team, available support is limited.                                                        | 54K                   | Negative             |
| 2. Investigate alternatives to tutorial education for courses in which tutorial education is not evaluated positively or in which attendance of the tutorial sessions is low.                                                                                                                     | 2026-2027<br>Lecturers will need time to restructure their courses and with the reduction in the size of the L&I team, available support is limited.                                                        | 64K                   | Potentially positive |
| 3. Integrate Academic Skills in the courses. TA capacity used by Academic Skills is very high compared to regular courses. By integrating the Academic Skills assignments in the regular courses and providing these courses with extra TA hours to                                               | 2027-2028<br>Preferably, this change is part of the curriculum re-design of the Bachelor programmes, which currently has been put on hold. It might be feasible to already pilot some changes in 2026-2027. | 97K                   | Potentially positive |

|                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                      |                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| accommodate this, we can still save on TA hours.                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                      |                                                                                                                            |
| 4. Limit hiring TA's who can only teach one tutorial group as much as possible. Especially when there is only one tutorial per week, students should teach at least two groups.                                                                                                     | <p>2025-2026<br/>A small reduction in 1-group contracts might be feasible.</p> <p>2026-2027<br/>With other measures in place to reduce the number of tutorials that need to be taught, we expect that 70% of the current 1-group contracts can be changed to 2-group contracts.</p> | 68K<br>(a 10 to 20K saving might already be possible for upcoming academic year)                                                                                                                     | Limited impact                                                                                                             |
| 5. Encourage departments to use PhD-candidates for tutorial education in Bachelor-1 and -2. We will discuss with the Vice Dean of Research and Department Directors if teaching in Bachelor-1 or -2 could be a mandatory element in an internal PhD-candidate's teaching programme. | 2026-2027. Time is needed for further development and approval of this proposal.                                                                                                                                                                                                    | 60K -72K<br>(actual saving might be lower as the time PhD-candidates can spend on teaching is limited. If they teach tutorials they have less time for other activities, such as thesis supervision) | Positive                                                                                                                   |
| 6. Fund part of our tutorial education (courses that participate in the International Classroom project) from the HOKA (BAO) funds.                                                                                                                                                 | <p>2025-2026<br/>The participation bodies will need to approve this use of the HOKA (BAO) money. The initial reaction from the School Council's Education Board was positive.</p>                                                                                                   | In 2025-2026 158K can be funded by HOKA (BAO). In 2026-2027 this is 235K.<br>(this is a conservative estimate as other courses will join the International Classroom project)                        | No impact on tutorial education. Potential negative on another HOKA (BAO) project if that is cancelled / reduced in scope. |

## Cost reduction calculations

To calculate the estimated cost savings of the options, we used the following data and assumptions:

### Data sources

- Calculations are based on numbers from academic year 2023/2024. The number of tutorials per course and number of groups scheduled was determined using the scheduling information. Based on these numbers a total of 14240 tutorial hours were scheduled in 2023/2024, which equals 7120 tutorial sessions.
- Contract information, use of TA's per course in FTE, and the costs per TA hour were provided by the Tutor Academy (TAc).

- Information regarding the number of tutorial groups TAs teach was based on information from the current academic year 2024-2025. We received this information for most courses, but Fiscale Economie, Philosophy, Introduction to Mathematics, Mathematics & Game Theory, and Applied Statistics 1 and 2, were missing.

### Numbers used in the calculations

- A TA who teaches 1 tutorial group per week gets 2 hours for teaching and 2 hours for preparation, thus 4 hours in total. A TA who teaches 2 tutorials groups per week, gets 4 hours for teaching and 2 hours for preparation, thus 6 hours in total.
- TA costs per hour are EUR 30.
- Most TA's assist with grading. A TA that teaches one tutorial group per week and assists with grading, gets around 40 hours in total for the work done in the course. A TA that teaches two tutorial groups per week, gets around 60 hours.
- One FTE is estimated to cost EUR 51.000. We made the following assumption: total number of TA working hours for 1 FTE : 38 hours per week \* 45 working weeks = 1700.
- There is considerable variation in the how many groups a TA teaches in a week. On average 50% of the tutorial groups are taught by a TA that teaches only one group. 46% of tutorial groups are taught by a TA who teaches 2 groups, and 4% by TA's who teach 3 groups or more.

## Options to be implemented

Based on discussions in the Education Management Meeting, in the Education Committee of the School Council, and with the Tutor Academy, we would like to implement the following options to reduce costs for tutorial education:

1. Decrease number of tutorials;
2. Stop tutorial education in courses in which it is not considered useful;
3. Integrate Academic Skills in the regular courses;
4. Limit hiring TA's who can only teach 1 tutorial group per week;
5. Replace TA's by PhD-candidates;
6. Use the HOKA (BOA) budget to fund use of TA's in tutorials.

These options are explored further below. The options that were also considered but dismissed can be found in Appendix 1.

### 1. Decrease number of tutorials

Table 1 provides an overview of the number of tutorial contact hours in our courses. Given that our tutorial sessions are 2 hours, the number of tutorial sessions taught is the number of contact hours divided by 2.

Table.7;Number.of.contact.hours.in.the.Bachelor\_7.and.Bachelor\_8.courses

| # of contact hours for tutorials | # of courses |
|----------------------------------|--------------|
| =<5                              | 2            |
| 6-10                             | 8            |
| 11-15                            | 54           |
| 16-20                            | 8            |



|       |   |
|-------|---|
| 21-25 | 6 |
| >25   | 8 |

The majority of the Econometrics courses have 7 tutorial sessions (14 hours), which equals one session per week. The courses with over 20 tutorial hours are all 8 EC courses in Economics, except for the 6 EC course Macroeconomics in the Econometrics programme.

There is no relation between the number of tutorials sessions and the extent to which tutorials are considered useful. Neither do we find a relation between the number of sessions and the evaluation scores and attendance. More details can be found in Appendix 2.

The current number of contact hours for tutorials in a course is partly determined by didactic considerations and partly by our Service Level Agreement Education, which specifies a minimum number of contact hours for small scale education for each course. A drastic reduction in number of contact hours for tutorials will have considerable impact on the way a course is taught and structured.

We propose to consult the lecturers of all B1 and B2 courses to discuss options for reducing tutorial hours offered and to determine if and how they can be implemented. We do not propose to implement a blanket rule (such as a binding maximum on the number of tutorial hours per course).

The calculation below gives an indication of possible savings, based on a discussion with Bram van der Veen (former manager TAc) and Emö Oldenkamp (academic lead TAc). Throughout this report they will be further referred to as “the TAc”. The TAc indicated that for courses with more than 1 tutorial per week, a reduction to 1 tutorial per week might be feasible. 1 tutorial per week is seen as an absolute minimum. This means that for the course in Table 2 a reduction to 1 tutorial per week can be considered.

Table.8; Courses with more than 7 tutorial per week;

|           |                                | <b>Tutorial hours<br/>23/24</b> | <b>Tutorial hours<br/>if capped at 1<br/>tutorial per<br/>week</b> | <b>Number of<br/>groups</b> | <b>Total possible<br/>reduction in<br/>tutorial hours</b> |
|-----------|--------------------------------|---------------------------------|--------------------------------------------------------------------|-----------------------------|-----------------------------------------------------------|
| FEB11001  | Micro-economie                 | 26                              | 14                                                                 | 18                          | 216                                                       |
| FEB11001X | Microeconomics                 | 26                              | 14                                                                 | 17                          | 204                                                       |
| FEB11002  | Macro-economie                 | 22                              | 14                                                                 | 18                          | 144                                                       |
| FEB11002X | Macroeconomics                 | 22                              | 14                                                                 | 16                          | 128                                                       |
| FEB11013  | Introductie Data analyse       | 24                              | 14                                                                 | 18                          | 180                                                       |
| FEB11013X | Introduction to Data-analytics | 24                              | 14                                                                 | 16                          | 160                                                       |
| FEB11018  | Accounting                     | 26                              | 14                                                                 | 19                          | 228                                                       |
| FEB11018X | Accounting (IBEB)              | 26                              | 14                                                                 | 17                          | 204                                                       |
| FEB12001  | Toegepaste Microeconomie       | 26                              | 14                                                                 | 13                          | 156                                                       |
| FEB12001X | Applied Microeconomics         | 26                              | 14                                                                 | 16                          | 192                                                       |
| FEB12004  | Internationale Economie        | 26                              | 14                                                                 | 13                          | 156                                                       |
| FEB12004X | International Economics        | 26                              | 14                                                                 | 17                          | 204                                                       |
| FEB12012  | Introductie Econometrie        | 18                              | 14                                                                 | 16                          | 64                                                        |

|           |                               |    |    |    |             |
|-----------|-------------------------------|----|----|----|-------------|
| FEB12012X | Introduction to Econometrics  | 18 | 14 | 17 | 68          |
| FEB21009  | Lineair Programmeren          | 18 | 14 | 10 | 40          |
| FEB21009X | Linear Programming            | 18 | 14 | 8  | 32          |
| FEB21020  | Micro-economie (ectrics)      | 20 | 14 | 9  | 54          |
| FEB21020X | Microeconomics (econometrics) | 20 | 14 | 7  | 42          |
| FEB21022  | Macroeconomie (ectrics)       | 22 | 14 | 8  | 64          |
| FEB21022X | Macroeconomics (econometrics) | 22 | 14 | 6  | 48          |
| FEB22002  | Combinatorisch optimaliseren  | 20 | 14 | 4  | 24          |
| FEB22002X | Combinatorial Optimisation    | 20 | 14 | 5  | 30          |
|           | <b>Total</b>                  |    |    |    | <b>2683</b> |

Not all courses might be equally willing or able to reduce the number of tutorial hours. Especially for the Econometrics courses in the table, a reduction might not be feasible. It is also unlikely that it will be possible and/or desirable for all Economics courses. If we assume that for half of the economics courses (which include FEB21020(X) and FEB21022(X)) a reduction to 1 tutorial per week is feasible, and it is not feasible for any of the econometrics courses, we can save about 1200 tutorial hours. This equals 600 sessions.

Potential cost reduction;

Assuming that 300 of these tutorial sessions are taught by a TA that teaches one group per week and 300 by TA's that teach two or more groups per week, an estimate of the cost reduction is:  
 $300 \times 4 \times 30 + 300 \times 2 \times 30 = \text{EUR } 54.000.$

## 2. Stopping tutorial education in certain courses

A closer look at the attendance and evaluation of the tutorials in our Ba1 and Ba2 courses, shows that although generally tutorials are appreciated, this is not the case for all courses. Table 3 shows the courses which score below 3.5 on the question "The tutorials helped me to understand the materials" and/or have an average attendance of less than 40%.

Table 9: Courses with a low rating of the tutorials and/or low attendance; Courses in red and italics warrant particular attention;

| Course                                 | Attendance - average academic year 23-24 and 22-23 | Tutorials helped to understand materials - academic year 23-24 |
|----------------------------------------|----------------------------------------------------|----------------------------------------------------------------|
| <i>Filosofie</i>                       |                                                    | <i>3,23</i>                                                    |
| <i>Philosophy</i>                      |                                                    | <i>2,58</i>                                                    |
| Toegepaste micro-economie              | 35%                                                | 4,13                                                           |
| <i>Finance 1</i>                       | <i>30%</i>                                         | <i>3,38</i>                                                    |
| Finance 1 (IBEB)**                     | 39%                                                | 3,76                                                           |
| Internationale economie                | 35%                                                | 4,06                                                           |
| International Economics                | 37%                                                | 4,46                                                           |
| <i>Intermediate Accounting*</i>        | <i>26%</i>                                         | <i>3,13</i>                                                    |
| <i>Intermediate Accounting (IBEB)*</i> | <i>20%</i>                                         | <i>3,41</i>                                                    |
| Introduction to Behavioural Economics  |                                                    | 3,48                                                           |
| Economics of the Welfare State**       | 81%                                                | 3,49                                                           |

|                                    |            |             |
|------------------------------------|------------|-------------|
| <i>Inleiding programmeren</i>      |            | <i>2,75</i> |
| <i>Introduction to Programming</i> |            | <i>3,14</i> |
| Combinatorisch optimaliseren       | 26%        | 3,60        |
| <i>Econometrie 2</i>               | <i>32%</i> | <i>3,84</i> |
| <i>Econometrics 2</i>              | <i>33%</i> | <i>3,73</i> |
| Niet-lineair Optimaliseren         | 33%        | 3,20        |
| Markov Processes                   | 36%        | 4,56        |
| Programmeren                       | 39%        | 2,00        |
| Programming                        | 32%        | 4,00        |
| <i>Simulatie</i>                   | <i>47%</i> | <i>2,67</i> |
| <i>Simulation</i>                  | <i>34%</i> | <i>2,77</i> |
| Mathematical Economics             | 39%        | 4,25        |
| Finance (econometrie)**            | 26%        | 3,83        |

For most year-2 Econometrics courses, the response rate to the course evaluation is rather low (N<10) making the course evaluation score unreliable. For the courses in red we suggest further investigation to see if the tutorials can be replaced by an alternative that fits well with the course objectives and is cost-effective. Again, this will be done in consultation with the respective lecturers.

#### Possible.cost.reduction

If we decide to stop teaching tutorials for certain courses, they will need to be replaced by another (small-scale) teaching activity, which will also cost money. Some of these might, however, be more efficient than having one or two tutorials each week. If we assume that for 5 courses in this list we can come up with an alternative that is more cost-effective, and that this about halves the current costs for small scale education in this course, we could achieve the following cost saving. The average use of TAs per course is about 0.5 FTE. For 5 courses, this totals 2,5 FTE. If we half this, we save 1,25 FTE, which is equal to  $1.25 * 51.000 = 63.750$ .

### 3. Integrate.Academic.Skills in the regular courses

Academic Skills uses 4.4 FTE, which is about 10 times as much as other 4 EC courses. The set-up of these course has been the topic of much debate. Despite many attempts to improve it, students still do not evaluate it very positively, with the overall grade given in the course evaluation often no higher than a 6.5. The Academic Skills assignments could therefore again be integrated into the courses. Some initial ideas for integration of Skills in the courses have already been developed as part of the International Classroom project. Given that this project only focused on a selection of course, these have not been further implemented, but they can form a basis for upcoming work. Courses that need to include an Academic Skills assignment could receive an additional 0.5 FTE in TA capacity. If we have five assignments, 2.5 FTE in TA capacity is necessary, which is a considerable reduction compared to the 4.4 FTE.

#### Possible.cost.reduction

A 1.9 FTE reduction in TA capacity equals  $1.9 * 51.000 = 96.900$ .

## 4. Limit hiring TA's who can only teach 1 tutorial group per week

TA's get a fixed number of hours for teaching and preparation. The more tutorial groups a TA teaches, the more efficient it is, as the preparation time per session remains the same. We save 2 hours per TA per week if we only hire TA's who can at least teach two tutorial groups per week. We therefore suggest limiting hiring TA's that can only teach one tutorial group.

Somewhat related to this option is to make more use of post-graduate tutors. These tutors can always teach multiple groups and are much more flexible. If less students show up in tutorials than expected, groups taught by a post-graduate tutor can easily be cancelled as the post-graduate tutor can do other tasks.

Potential.cost.reduction;

With the above-described measure of reducing the number of tutorials per week to 1 for a number of courses, we already reduce the number of tutorial sessions from 7120 to 6520. Half of the tutorial sessions are taught by students who teach only one tutorial session per week. This thus equals  $6520 \cdot 0,5 = 3260$  tutorial sessions. The number of TA hours needed to teach these sessions is  $3260 \cdot 4 = 13040$ . If we assume that we can replace 70% of these TA's for TA's who can teach two tutorial groups per week, the number of TA hours needed to teach these sessions is  $0,7 \cdot 3260 \cdot 3 + 0,3 \cdot 3260 \cdot 4 = 10758$ . This is a cost reduction of  $(13040 - 10758) \cdot 30 = \text{EUR } 68.460$ .

## 5. Replace TA's by PhD-candidates

Currently, is very attractive for department to use TA's for their education as the department does not need to pay for them. PhD-candidates could, however, be very good alternatives to TA's for teaching tutorial groups. They could teach a course for multiple years, decreasing preparation time and increasing quality of teaching. They can furthermore teach more groups, are available the whole week (making planning easier), and are available to help grading the resits in the summer. This can significantly benefit the quality of education and lowers the administrative load of the TAc. Furthermore, for the PhD-candidates themselves it is also useful to get this type of teaching experience. If PhD-candidates only supervise theses and/or help with grading assignments, they might start a post-doc or assistant professor function without any actual teaching experience in front of a classroom, which is undesirable. We will discuss with the Vice-Dean of Research whether we can make it mandatory to let PhD-candidates teach Bachelor-1 or -2 tutorials.

Possible.cost.reduction

If a PhD candidate replaces 2 TA's, one TA who teaches 2 groups and one TA who teaches 1 group, this would save the TAc roughly EUR 3000 (a TA who teaches 1 group costs around EUR 1200, a TA who teachers two groups 1800). If 5 PhD candidates within a department would each take over teaching 3 tutorial groups in one Ba1 or Ba2 course, this thus would save EUR 15.000 per department. With four departments, this leads to a saving of EUR 60.000.

As an alternative calculation: we have about 50 FTE of PhD-students in the School, which implies an inflow of about 12 PhDs per year. Suppose each PhD-student would be involved in 1 course for at least two years. Then per year, 24 PhD-students would be involved in tutorial teaching, creating total savings of  $24 \cdot 3000 = 72.000$  euro.

It should be noted though, that PhD-candidates can only teach for a limited number of hours and if they have to teach tutorials they cannot take on other teaching activities (or do research).

## 6. Use the HOKA (BAO) budget to fund use of TA's in tutorials

The HOKA (BAO) funds have become structural since 2025. An advantage of this change is that the administrative burden of justifying the expenses has decreased and institutions are trusted to spend the money well. This gives more flexibility regarding what we can use the money for. At the same time, it is still expected that higher education uses the money to make improvements. The participation bodies have an important role in creating and approving the plans for the use of the HOKA (BAO)funds.

An option might be to use HOKA (BAO) money to fund the improved assignments and tutorials in the courses that take part in the International Classroom project. Within Economics & Business Economics the courses in Table 6 participate.

Table 6. Courses that participate in the International Classroom project

| Course                         | Phase  | TA use in FTE's |
|--------------------------------|--------|-----------------|
| Microeconomics                 | Year 1 | 1,56            |
| Macroeconomics                 | Year 1 | 0,83            |
| Organisation & Strategy        | Year 1 | 0,74            |
| Applied Microeconomics         | Year 2 | 0,65            |
| Economics of the Welfare State | Year 2 | 0,33            |
| International Economics        | Year 2 | 0,44            |

The IBEOR programme also participates in the International Classroom project. They, however, do not know yet which courses will participate. When they do, tutorial education in these courses can also be funded from HOKA (BAO), and will be added to the calculations.

Costs than can be funded by HOKA (BAO) instead of regular education funds

The below estimate is conservative as other courses are likely added to the International Classroom project which can then also be funded from HOKA (BAO).

- Year 1 courses only: 3,1 FTE \* EUR 51.000 = EUR 158.100
- Year 1 + 2 courses: 4,6 FTE \* EUR 51.000 = EUR 234.600

As an additional option, if we decide to integrate Academic Skills into courses (see option 4), we could also use HOKA (BOA) funding for Academic Skills.



## Appendix 1 – Options to reduce costs for tutorial education that were explored but dismissed

| Option                                                                                                                                                                                                                                                                                                                                                                                                                                        | Earliest implementation                                                                                                                                                                                                    | Estimated cost saving | Impact education |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------------|
| <p>Increase group size in Bachelor-2 tutorials from 30 to 40 students.</p> <p>Dismissed because:<br/>As many Bachelor-2 courses already “overbook” rooms as generally only half of the students show up, the cost saving is likely to be lower than estimated.<br/>For inexperienced TA’s, a group of 40 is challenging.<br/>Availability of 40+ rooms might remain limited as some other Schools already move to a group size of 40.</p>     | <p>2026-2027</p> <p>Due to the demolition of some of the older buildings, we do not have sufficient rooms with 40+ capacity in 2025-2026. In academic year 2026-2027 the new 40+ rooms in Langeveld will be available.</p> | Maximum of 58K        | Negative         |
| <p>Place a limit on the TA hours a course can use.</p> <p>Dismissed because:<br/>Very restrictive. Freedom of lecturers to design their course optimally will be severely limited.<br/>Quality of education will likely suffer (e.g. replacing assignments with an MC exam because TA’s can no longer grade).</p>                                                                                                                             | <p>2026-2027</p> <p>Lecturers will need time to restructure their courses, particularly the assessment.</p>                                                                                                                | 224K                  | Very negative    |
| <p>Remove mandatory attendance in Bachelor-1</p> <p>Dismissed because:<br/>Doing this has important didactical implications. Alternatives would need to be put in place to still motivate students to study regularly and seriously. Such a decision needs to be part of the curriculum re-design and cannot be made purely as a cost-saving measure.</p>                                                                                     |                                                                                                                                                                                                                            |                       |                  |
| <p>Change the duration of a tutorial session</p> <p>Dismissed because:<br/>Students do not want to come to campus for only 1 hour. Reducing tutorial hours can thus better be achieved by reducing the number of tutorials sessions than by reducing the length.<br/>An alternative is to make the tutorials longer (3 hours instead of 2 hours) to make them more efficient to teach. This is, however, not possible for the schedulers.</p> |                                                                                                                                                                                                                            |                       |                  |

## Appendix 2 – Relation number of tutorial hours with a number of indicators

Figure 1 shows that correlation between the number of tutorial hours and the extent to which the tutorials are considered useful. Table 2 provides average evaluation scores and attendance for courses with less than 15 tutorial contact hours and for courses with 15 tutorial contact hours or more. The relationship between number of tutorial contact hours and their usefulness and attendance is unclear. Courses with few tutorial sessions can be evaluated very positively but very negatively as well. The same goes for courses with many tutorial sessions.

Figure.A7; Relationship between perceived usefulness of tutorials and contact hours tutorials

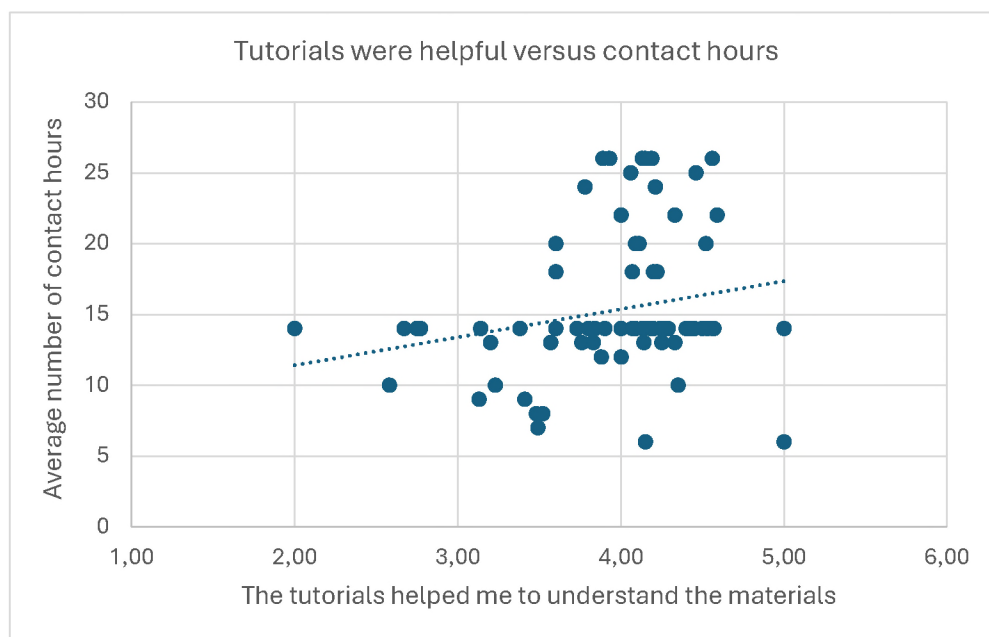


Table.A8; Average attendance and the average score on three questions in the course evaluation. academic year.8689\_8680;

|         |        |                     | tutorials helped to understand materials | I learned a lot in this course | what grade would you give this course | average attendance |
|---------|--------|---------------------|------------------------------------------|--------------------------------|---------------------------------------|--------------------|
| Econ    | Year 1 | < 15 contact hours  | 3,96                                     | 3,80                           | 7,06                                  |                    |
|         |        | >= 15 contact hours | 4,08                                     | 3,89                           | 6,71                                  |                    |
|         | Year 2 | < 15 contact hours  | 3,82                                     | 3,71                           | 6,60                                  | 51%                |
|         |        | >= 15 contact hours | 4,08                                     | 3,99                           | 6,90                                  | 53%                |
| Ectrics | Year 1 | < 15 contact hours  | 4,00                                     | 4,16                           | 7,10                                  |                    |
|         |        | >= 15 contact hours | 4,33                                     | 3,75                           | 6,61                                  |                    |
|         | Year 2 | < 15 contact hours  | 3,81                                     | 3,83                           | 6,62                                  | 45%                |
|         |        | >= 15 contact hours | 3,86                                     | 3,93                           | 6,40                                  | 34%                |