



Course Analysis – AG2141 (Period 3, 2017-2018)

Course analysis carried out by Andrew Karvonen (apkar@kth.se) on 2018-06-15

Course Data

Course title	Course number
Urban Infrastructure	AG2141
Course credits and points distributed on exam forms	When the course was conducted
7.5 credits	2017-2018, Period 3
Course coordinator and other teachers	Number of registered students
Andrew Karvonen (course responsible) Naomi Lipke (teaching assistant)	26

Course Design

Briefly describe the course design (learning activities, examinations) and any changes that have been implemented since the last course offering.

This was my first year as course responsible and Naomi as teaching assistant. Naomi and I retained the title of the course and the examination structure but introduced completely new course content. The course examination consisted of the following:

1. NÄR1 - Lectures, 1.5 credits, grade scale: P, F
2. TEN1 - Examination, 3.0 credits, grade scale: A, B, C, D, E, FX, F
3. ÖVN1 - Exercises/Excursions, 3.0 credits, grade scale: A, B, C, D, E, FX, F

The course was split into two parts. The first half consisted of classroom activities (lectures and discussion groups) while the second half consisted of project-based learning (a site visit and group project work). Scheduled learning activities consisted of the following:

Activity	Hours
Lectures	8
Discussion groups	13
Examination	3
Field trip	6
Project work	14
Group presentations	6
TOTAL	50

Student study time was estimated to be as follows:

Activity	Hours
Reading preparation for lectures and discussion groups	40
Preparation for examination	20
Group project work (report and presentation)	90
TOTAL	150



THE STUDENT'S WORKLOAD

Does the students' workload correspond to the expected level (40 hours/1.5 credits)? If there is a significant deviation from the expected, what can be the reason?

The estimated workload for the course corresponded to the 200 hours for a 7.5 credit course. On average, the students reported that they spent between 8 and 12 hours per week over the 9 weeks. This equates to 72 to 108 hours in total which is significantly lower than the anticipated 200 hours. Student attendance in class was consistent so the deviation between expected and actual hours spent on the course can be attributed to lower than expected work outside the classroom.

THE STUDENTS' RESULTS

How well have the students succeeded on the course? If there are significant differences compared to previous course offerings, what can be the reason?

The distribution of final grades was as follows:

Grade	Students
A	15 (58%)
B	5 (19%)
C	5 (19%)
D	0 (0%)
E	1 (4%)
F	0 (0%)

The course was completely redesigned this year so comparison with previous years is not relevant.

OVERALL IMPRESSION OF THE LEARNING ENVIRONMENT

What is your overall impression of the learning environment in the polar diagrams, for example in terms of the students' experience of meaningfulness, comprehensibility and manageability? If there are significant differences between different groups of students, what can be the reason?

The students had a consistently positive impression of the learning environment and there was minimal variation in opinions. Information on gender, nationality, and other student attributes was not collected through the student evaluations.

ANALYSIS OF THE LEARNING ENVIRONMENT

Can you identify some stronger or weaker areas of the learning environment in the polar diagram - or in the response to each statement - respectively? Do they have an explanation?

The majority of student feedback about the course was positive. The following negative feedback was identified:

- The students indicated that they did not receive feedback throughout the course. It is not clear if the students were simply answering the stated question or if they would appreciate additional feedback. There was no mention of feedback in the comments. The students received written feedback on the written exam in Week 8, oral and written feedback on the group presentations in Week 10 and written feedback on the group reports in Week 14.



- The students asked for more explicit instructions on the requirements to achieve particular grades on the assessments. For next year, we will add a grading grid to the assessment instructions.

ANSWERS TO OPEN QUESTIONS

What emerges in the students' answers to the open questions? Is there any good advice to future course participants that you want to pass on?

Several of the students noted that enjoyed the in-class discussions with other students and they understood the two-part organisation of the course (classroom followed project work). Some students were confused about the instructions on the group project and did not appreciate the length and/or level of the assigned readings. As a whole, they encouraged future students to engage with the course, attend the lectures and doing the readings to get the most out of the course.

PRIORITY COURSE DEVELOPMENT

What aspects of the course should primarily be developed? How could these aspects be developed in the short or long term?

Based on the student evaluations and my impressions of the course, we intend to make the following changes for next year:

- Course Schedule: We think it would be beneficial to spend less time on classroom work and more time on the project-based learning. We felt that the second half of the course was a bit rushed and the students would have benefited from additional to work on their projects.
- Written Exam: Administering the written exam proved to be a lot of work for me (scheduling rooms and invigilators, setting up re-examination times, etc.) and seemed to be unnecessarily stressful for the students. Next year, we will change this to a take-home exam and ask the students to write essays.
- Group Project: We will provide more detailed instructions on the group project to ensure that the students understand the purpose and requirements of the exercise. Many students were lost at the beginning of the group project and this is likely due to a lack of clear instructions. Also, we hope to engage the external partner (Urban ICT Arena in Kista) more fully. They provided an introduction to the study site and a walking tour. We would also like to have them participate in the final student presentations and provide feedback to the students. We might also be able to organise a workshop with some of the stakeholders in Kista.
- Guest Lecturers: We invited three guest lecturers (two from KTH, one from Linköping University) and will invite other individuals next year.



Course Evaluation Summary

Course	AG2141 Urban Infrastructure
Academic Year	2017-2018 Period 3
Course Responsible	Andrew Karvonen
Teaching Assistant	Naomi Lipke
Date of Evaluation	5 March 2018
Registered students	26
Surveys completed	23
Completion Rate %	88

On average how many hours/week did you work with the course (including scheduled hours)?

Mean 10.2, SD 2.2, Response Rate 65%

Statements

Disagree	Mostly agree	Neither agree nor disagree	Mostly agree	Agree
1	2	3	4	5

		Mean	SD	Response Rate (%)
1	The intended learning outcomes helped me to understand what I was expected to achieve.	4.2	1.0	100
2	I worked with interesting issues.	4.8	0.4	100
3	I regularly spent time to reflect on what I learned.	4.5	0.7	100
4	I explored parts of the subject on my own.	4.3	0.8	100
5	My background knowledge was sufficient to follow the course.	4.5	0.9	100
6	I felt togetherness with others on the course.	4.5	0.7	100
7	I received regular feedback that helped me to see my progress.	3.3	0.7	100
8	The course was challenging in a stimulating way.	4.3	0.6	100
9	I had opportunities to choose what to do.	4.3	0.9	100
10	I understood what the teachers were talking about.	4.8	0.5	100
11	Understanding of key concepts had high priority.	4.7	0.5	100
12	I was able to practice and receive feedback without being graded.	3.9	0.9	100
13	The course activities helped me to achieve the intended learning outcomes efficiently.	4.3	0.7	100
14	I was able to learn by collaborating and discussing with others.	4.6	0.7	100
15	The atmosphere on the course was open and inclusive.	4.9	0.4	100
16	I was able to learn in a way that suited me.	4.3	0.8	100
17	I understood how the course was organized and what I was expected to do.	4.9	0.3	100
18	I was able to learn from concrete examples that I could relate to.	4.6	0.6	100
19	I was able to get support if I needed it.	4.7	0.5	96
20	The assessment on the course was fair and honest	4.8	0.5	91
21	I was able to learn by trying out my own ideas.	4.4	0.7	100
22	I understood what I was expected to learn in order to obtain a certain grade.	3.9	1.3	100

Open Questions

Question 1: What was the best aspect of the course? (Response Rate 95%)

- I like that the final written exam took place midway during the period as it gave me sufficient time to prepare for the exam as well as for the group project in the second half of the period. I also had a lot of fun with course. Pace was good especially for the first half.
- Discussing literature during class.
- I enjoyed the lectures! It was great to have discussions during these. Most of the literature were nice.
- Andy's humor 😊 That we discussed the readings in class. If there were parts you didn't understand while reading, you got a second chance.
- Teacher is very nice. Easy going. Good American guy.
- Well structured. Kista visit.
- Interesting topics, articles, ideas, which I wouldn't have encountered on my own. Great lectures
- The lecturer made the course extremely fun and interesting. The various guest lecturers that came for lessons.
- Good structure with readings before that you were obliged to do followed by interesting discussions in class /groups.
- The open perspective of infrastructure and open atmosphere to ask, discuss, and learn. Andy is a really good lecturer.
- Group Work!
- The professor is quite intelligent with lots of knowledge and he really manages to raise your interest in the discussed topics. Also the study visit including the final project related to it was really interesting.
- Discussions. I like that the required readings were actually discussed in class. I like that we could reflect on issues relating to infrastructure.
- The organization (readings to prepare before lectures) was really interesting and mad the lectures very interesting. Some comment regarding the organization lectures / project. Articles and themes were interesting and I feel that I learned a lot.
- The first part (lectures) was really interesting and the historical approach was excellent. I really appreciated it and enjoyed going to class. The idea to do first lectures and then the project is also a good one.
- We were given enough time to prepare the group project and to choose topics that the whole group is interested in.
- A good atmosphere in the classroom. Interesting topics.
- The best aspect was the structure of the course. Getting done with the exam first, then the presentation of the idea and lastly the report helped to create a clear line of thought and there was time to fully understand what we learned.
- The project offered a lot of insight about working in group and how to make a space more livable.
- The best aspect was the history of the development of the city with the technology and how technological involvement changes the cities in the future.
- The open environment for discussions.
- I really liked the lectures. I learned a lot about urban infrastructures. I have liked the historic organization of the lectures. It was interested working in groups during the lectures. It helped create a nice class environment.

Question 2: What would you suggest to improve? (Response Rate 82%)

- Use one more week to prepare the group project report, as we had little more than one week to work on it just after the presentation.
- Maybe schedule the presentations at the end of the period so that we can work on the report concurrently.

- The sanitation lecture /part. It was boring (unfortunately).
- There were some (one?) of the compulsory readings that was very long to read and the text was extremely blurry. I had to try to find that text elsewhere, because I was unable to read it.
- It was a bit difficult to grasp what the group project was about. On the other hand, I felt we got good help when we asked for it.
- More visiting to different urban infrastructures.
- Keep being interesting. Groups could be less. People could be involved more on different topics of urban infrastructure.
- Getting started with the group project was difficult; it seemed vague.
- Less readings, more videos or visual readings.
- The schedule and canvas. The usage of canvas was good, but the schedule was not correct (it said lecture or seminar, even though it was neither lecture or seminar, egö wrong in the timeedit to the real schedule.
- Have regular breaks, 45 min lecture, 15 min break.
- Remove mandatory participation at lectures.
- It was unclear when it was mandatory to be there at workshops, which made me stressed.
- Move the exam to the end of the period, please.
- The subjects sometimes are too broad and theoretical. Maybe that could change.
- Nothing that I can think of.
- The project could have been more precise in a sense that the subject is so broad that I feel like being lost in so many possibilities in a short amount of time.
- Maybe add a little more information on the lecture slides. I missed one or two of the lectures and it was difficult catching up on all the key concepts in order to study for the written exam.
- I didn't really enjoy the project subject to improve Kista might be relevant, but I didn't enjoy working on it unfortunately. I don't have any other idea of project at the moment.
- Sometimes the literatures are too long to finish reading. It would be better if they could be a little shorter.
- The articles we had to read were lengthier and had very advanced language. Therefore it was a bit difficult to read all the articles within the given time period. Therefore it is good to reduce the content of the reading and use an alternative method to cover it.
- More discussion, but that is very hard with such a big group. Maybe have some sort of moderation.
- The sanitation lecture was not good.
- Please have a lecture on new urban infrastructure technologies being implemented around the world. Examples of how and why technologies have been selected through specific case studies would be great.

Question 3: What advice would you like to give to future participants? (Response Rate 95%)

- Have fun with this course. I think there's a lot of room to learn from the classes while enjoying yourself with this course. Hands down my favorite course this period.
- Read literature more thoroughly, more if you have time.
- Go to the lectures!
- Being at the lectures, paying attention, and taking notes there helps you a lot. Look beforehand on how many pages there are to read before the next class.
- Be active in the lecture discussion and group discussion. Try to attend all the lectures. They are really helpful for the exam.
- Use the literature as motivation to study about more cases and examples of urban infrastructure.
- Read the articles, and read them early.
- Take this course!

- Spend time on the base literature and read it actively – by the time for the exam, it is all done. Just go back to your notes.
- Read the texts before the lectures and actually reflect on them – it will give out more of the lecture.
- Just enjoy it!
- Read all the given literature before the lectures.
- Ask questions. Come prepared to the lectures. Take notes during the lectures.
- Read the articles before attending lectures. Reflect on what you are learning.
- Read all the literature when it is scheduled. Write notes while reading. It helps when studying for the exam.
- I would give them as advice to work together to prepare for the exam, as a team, you come up with a lot of ideas and can complete your course notes. It broadens your vision of the subject.
- I would advise them to join the discussions actively.
- If my suggestion above (shortening the readings) is not adopted, work hard and spend more time on the literatures.
- Pay attention in lectures; it pays off at the exam.
- Listen to Andy; he makes sense.
- To go to every lecture because a lot of the exam questions are connected to the lectures.
- There were very interesting topics and diverted a lot from technical studies to more social, economic, and politically oriented ones.

Question 4: Is there anything else you would like to add? (Response Rate 61%)

- Thank you Andy!
- Keep going Andy! You are an amazing teacher!
- Good that you provided the text on how to read academic articles. It was very useful as a slow reader to know that you didn't expect us to really take in all that we read, that it's okay to set a time limit for each text.
- Thank you for the course.
- I really enjoyed this course and how the course is structured and graded. Special thanks to Professor Andrew!
- Course felt very open with topics allowing to drift in a good and stimulating way – that's great!
- Great course, fun to learn more about infrastructure and societies. Nice with the field visit to Kista.
- Maybe more updated modern infrastructure ideas.
- Tack så mycket!
- Thank you for this nice course!
- The exam is just learning something by heart which doesn't really reflect one's intelligence.
- Nada.
- Fun course! I liked it!