Please note that there is only one respondent to this form: the person that performs the course analysis.

Course analysis carried out by (name, e-mail):
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DESCRIPTION OF THE COURSE EVALUATION PROCESS
Describe the course evaluation process. Describe how all students have been given the possibility to give their opinions on the course. Describe how aspects regarding gender, and disabled students are investigated.

The course evaluation has been conducted with the online KTH Learning Experience Questionnaire v3.1.4 (LEQ).
The course responsible (Roberto Bresin) has encouraged students in several occasions to complete the course evaluation since it is one of the important instruments for helping improving the quality of the course and provide a better course for future students attending the course. Student have been automatically contacted and reminded via the course evaluation system.
The course evaluation was done after the final project presentation.

DESCRIPTION OF MEETINGS WITH STUDENTS
Describe which meetings that has been arranged with students during the course and after its completion. (The outcomes of these meetings should be reported under 7, below.)

Continuous discussion with the students have been conducted during the entire duration of the course both at lectures and laborations. During the first introductory lecture students were invited to first briefly present expectations they had from the course.
At the beginning of the course a student course representative was nominated: Amanda Andrén.
After the course grades were registered in Ladok, the course responsible (Roberto Bresin) mail to all students and asked them about comments/suggestions for improving the course quality. This was done for collecting more comments since only 7 out of 15 students completed the course evaluation.

Course responsible Roberto Bresin and student course representative Amanda Andrén went through the course evaluation results. We agreed that the course went quite well and smoothly and the students were in general satisfied about the course (as it is possible to notice from their evaluation).
COURSE DESIGN
Briefly describe the course design (learning activities, examinations) and any changes that have been implemented since the last course offering.

The 2021 edition of the course has followed basically the same structure of the 2020 edition: 11 lectures (given by 6 different researchers), 1 study visit at Europa Foley and Adr (because of the pandemic situation, this year the study visit was in the form of a video-recorded keynote by Ulf Olausson), 1 sound walk (for the second time, following the success of this activity in the 2020 edition of the course), 3 laboratory sessions, 1 project, and 5 assignments.

Also this in 2021 (as in 2020) we had a general theme for the course project: "soundscape of the future". This has been proved to help students in their project design and implementation in 2020 and this has happened also for the 2021 student projects.

Compared to the 2020 edition of the course, we make lab sessions 1 hour longer (from 3 hours to 4 hours) so that students felt less stress to finish in time and this worked well. We added in some lectures content related to the theme of the project, "soundscape of the future", as asked by some students in the 2020 evaluation of the course.

Because of the pandemic situation it was not possible to have all students working on their project in our labs and/or coming to KTH. For this reason we introduced several project suggestions, mainly based on sonification, which could be implemented by working at home and/or online.

As suggested by some students at the end of the 2020 edition of the course, we added two non-compulsory modules about two software tools that can be used in laboratory sessions and projects. One module about SuperCollider and one about Pure Data. The modules were based on a short video lecture, a PDF file with text instructions and suggestions, and some useful code examples which could be used in the final project. This was done for students who were not familiar with these tools. Some of the students took these modules in 2021.

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

The course is usually about 11 weeks long, that means that the expected workload should have been about 18 hours/week. Students reported an average workload of 13.4 hours/week (with a minimum of 3-5 hours/week (for 1 students) and a maximum of 24-16 hours/week (for one student). In 2020 the average workload was of 13.7 hours/week.

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?

There were 15 students registered to the course. 15 have successfully completed the course in the scheduled time.

Overall the students succeeded very well on the course and we observed that the overall quality of the sound design works developed both at laboratory sessions and projects were of high quality. Final results were, similar as in the 2020 edition of the course, the best in the history of the course: 12 As, 3 Bs.

Results from previous editions of the course were:
2020: 21 students: 16 As, 5 Bs
2019: 8 students: 5 Bs, 2 Cs, and 1 E
2018: 14 students: 3 As, 8 Bs and 3 Cs
2017: 14 students: 4 As, 6 Bs, 4 Cs
HT16/VT17: 19 students: 6 As, 8 Bs, 2 Cs, 3Ds
STUDENTS´ ANSWERS TO OPEN QUESTIONS
What does students say in response to the open questions?

QUESTION
What was the best aspect of the course?

ANSWERS
- I liked the introduction to Pure Data, it's a fun program to use
- Very clear structure and great lectures.
- The way the course was organized with lectures, assignments and project felt like it had a good flow.
- The close working relationship between students and teachers. It was always possible to get tips and feedback and it always felt safe to ask questions.

QUESTION
What would you suggest to improve?

ANSWERS
- The content of the labs, they had very little to do with the intended project work
- Some of the labs were a bit hard because we didn't have a tutorial before the lab on how the software worked. For example Pure Data or Audacity, it could have been great with a hands on tutorial before, maybe just a follow along lecture where you show how to do some basic things and we can follow along and test.
- The communication is horrible. Almost all questions put in discussion were left unanswered. It felt like it was difficult to contact course responsible.
- More prior knowledge of the programs used in the course would be needed. It is not the responsibility of this course but feels important to point out as a good prior knowledge "requirement" or tips to have worked in things like SuperCollider or Pure Data to a slightly greater extent than we had done now.

COMMENTS BY COURSE RESPONSIBLE
The content of the labs could be experienced as not relevant for the final project at a first glance. We designed the labs in order to train/educate the students to listen to sounds in a more concentrated way ("active listening"), and to work with sounds as "material" since the course is about "sound in interaction". We teachers in the course have noticed how the lab structure/content adopted already in 2020 has significantly improved the quality of the sound design of the student projects.
We have introduced two non compulsory modules for students who do not have specific knowledge in either pure data nor SuperCollider. We have suggested students to take those modules. Students coming from the Media Technology Bachelor will find easier to work with SuperCollider in the future since it is now a compulsory module in "DM1595 Program Development for Interactive Media".
I must say that I do not understand the comment about the communication in Canvas. This is also in contradiction with another student comment: "The close working relationship between students and teachers. It was always possible to get tips and feedback and it always felt safe to ask questions."
All answers have bene answered. It is probably the "discussion" section in Canvas that is not the best tool. I was also available at all lectures for discussing anything about the course.

QUESTION
What advice would you like to give to future participants?

ANSWERS
- Learn Pure Data thoroughly
- The TA's were really helpful during the labs and project, don't hesitate to ask for advice on which approach to take or ask questions. It's a great learning opportunity
- Plan ahead, participate in all lectures, do the assignments in time and be ambitious for the project but don't try to do too much in it (especially if you don't have any previous experience in the programming languages)
- Make a very clear plan for how you visualize the final project. Both for the teacher's sake but also to ensure that within your group you have the same vision for how the product should look and work

COMMENTS BY COURSE RESPONSIBLE
About Pure Data, see my comment above.

QUESTION
Is there anything else you would like to add?

ANSWERS
- The Paper Reviews feels bolted on, feels like an afterthought.
- This was a very fun and interesting course!

COMMENTS BY COURSE RESPONSIBLE
The paper review has always been part of the course. The main idea is to monitor that students read at least some of the relevant literature for the course and that they choose papers which can be helpful for their final project: in this way part of the background information is already prepared at the start of the project work.
SUMMARY OF STUDENTS’ OPINIONS
Summarize the outcome of the questionnaire, as well as opinions emerging at meetings with students.

The overall impression is that students appreciated the course content and its organization as it was for the 2020 edition of the course. Also this year the introduction of sound walk and its relation to Lab sessions was appreciated. We have seen that even this year the sound walk and lab exercises have contributed to an overall increased quality of the projects since students became more aware of the importance of sound qualities in general.

The introduction of a general theme for the course project ("soundscape of the future") has proved also this year to positively help students in their project design and implementation. Our positive impression is also validated by the course results which were the best recorded in the whole history of the course: 12 As, 3 Bs. (Even better than results in 2020 which were also very good: 16 As and 5 Bs)

OVERALL IMPRESSION
Summarize the teachers’ overall impressions of the course offering in relation to students’ results and their evaluation of the course, as well as in relation to the changes implemented since last course offering.

The overall impressions of the course is that students find the course content interesting and engaging. This was reflected by the very good results and the quality of the projects.

The small changes implemented this year seems to have helped the students in their work. This is reflected in the students comments (reported above) when answering to the question "What was the best aspect of the course?"

"I liked the introduction to Pure Data, it’s a fun program to use"

"Very clear structure and great lectures."

"The way the course was organized with lectures, assignments and project felt like it had a good flow."

"The close working relationship between students and teachers. It was always possible to get tips and feedback and it always felt safe to ask questions."

ANALYSIS
Is it possible to identify stronger and weaker areas in the learning environment based on the information you have gathered during the evaluation and analysis process? What can the reason for these be? Are there significant difference in experience between:
- students identifying as female and male?
- international and national students?
- students with or without disabilities?

We did not notice significant differences in experience between students.

PRIORITIZED COURSE DEVELOPMENT
What aspects of the course should be developed primarily? How can these aspects be developed in short and long term?

As written above, students in previous editions of the course asked for extra modules about software tools used in the course, since not all students had knowledge about SuperCollider and Pure Data. In the 2021 edition of the course we added two non-compulsory modules about two software tools that can be used in laboratory sessions and projects. One module about SuperCollider and one about Pure Data. The modules were based on a short video lecture, a PDF file with text instructions and suggestions, and some useful code examples which could be used in the project. This was done for students who were not familiar with these tools. Some of the students took these modules, but we noticed that it had been good if several student had taken them. Therefore, starting with the 2022 edition of the course, we will make these modules compulsory (P/F).