Course report
Formal Methods in Information Science (INFO104) 2023v

How has previous evaluations and proposed improvement measures been followed up?

There seems to be no previous evaluations for this course (at least none is shown in the *Kvalitetsbasen* at https://quality.app.uib.no).

Which pedagogical and academic choices is the course based on?

With respect to the contents, the course was based on those of its previous editions (mainly spring of 2022, but also spring 2021 and 2020, all of them taught by another lecturer)l. Still, we initially introduced some changes based on our experience teaching these subjects (e.g., we allocated two sessions for first-order logic instead of one, we allocated a whole session for proofs), as we feel some topics require further lecture time and practice to be properly grasped. This forced us to leave out some topics: graphs and probability. Then, the some changed were needed along the way (e.g., no lectures on computability), to adapt to the actual pace of the lectures and for the lecture's leave of absence in the last three teaching weeks.

With respect to assessments, we initially followed the pre-existing structure: four mandatory assignments through the course, for which the students needed to have a minimal grade of 75% to be allowed to present the final exam. Then, due to the leave of absence, the minimal grade was changed to 67.5%. We also made the additional decision of giving the students part of the assignments every week instead of giving them the full set of exercises a few days before the deadline. The reason for this was to encourage the students to work on the subject every week (instead of just before the deadline), and thus being able to notice earlier potential problems in understanding the topics under discussion. Finally, the last two mandatory assignments were not individual but rather in groups (pairs), to encourage students to discuss the exercises among themselves, hopefully providing them a better understanding.

What feedback do the students give on the course?

The verbal feedback was mostly positive, with most of the students the lecturer has the chance to talk with being happy with both the content of the lectures and their moderate pace. There were also students that considered the lectures being too slow or being repetitive. As usual, it is difficult to find a lecture pace that suits every student in a group, let alone a group that has more of 210 students. Still,

it would have been good to have additional material prepared (e.g., optional 'harder' exercises) so 'advanced' students could dig deeper into the course's contents.

The formal student evaluation was filled out by 28 students out of the 212 registered ones. Among these students, the most important criticism was the high workload the course required. The focus was, in particular, on the length and complexity of the mandatory assignments as well as on the stress/pressure they felt at having to get 75% of the mandatory assignments correct in order to present the final exam. Here are some ideas about how to tackle these issues.

1.   Concerning the workload of the course, one can make the mandatory assignments shorter and also lower their difficulty degree. However, the less we demand from the students at this stage, the less they will be able to use these tools in later courses.

2.   Concerning the pressure of mandatory assignments, one can change the way the mandatory assignments are used, making them a direct part of the final grade. For example, they can account for, say, 40%/50% of the final grade, with the final exam accounting for the remaining 60%/50%. This might lower the anxiety by turning the mandatory assignments from a plain checkbox to present the final exam (thus creating in some a sense of 'all this work was for nothing') to an actual component of the final grade. Still, this will increase the number of exams to be graded. Right now we lecturers have 3 weeks for grading the exam, and we could barely finished grading the received 179 exams. One can imagine this would have been more tricky if 212 exams were submitted.

Then, in the formal student evaluation, some students mentioned that they might benefit from more seminar sessions and/or more lectures. This motivates the discussion below on the contents of the course. Finally, on this formal evaluation some further students backed up the verbal feedback, mentioning that they were happy with the lectures.

What results do the students achieve on the course?
In terms of grades, the distribution for the 179 exams is the following: A (x12), B (x38), C (x68), D (x34), E (x7) and F (x20). It should be noted that, due to the 3-week period for grading the exams and the number of students expected to show, the exam was simplified, relying mostly on multiple choice questions, multiple response questions and matching/pairing questions. Note that all these 179 students got a grade above 67.5% on their mandatory assignments, which allow them to present the exam.

Is there a correlation between the learning objectives and the teaching and assessment methods?

The teaching activities (lectures with the occasional discussion that required the active participation of the students) were designed to meet the learning objectives (namely, to provide the students with the basics of elementary logic, set theory, relations and functions, graphs and trees, combinatorics, probability, information theory and computability). The amount of topics to be covered during the course explains why the lectures were so densely packed, and also why some changes needed to be made along the way to adapt to the pace the students required. The form of assessment was already decided at the time the course was assigned to me, but the changes we implemented (see the "pedagogical and academic choices" above) were also made with the learning outcomes in mind.

How does the course fit into the study program and / or course portfolio?
The course is a mandatory one in the Bachelor's Programme in Artificial Intelligence as well as the Bachelor's Programme in Information Science. It is, in my opinion, a fundamental course, as it provides "basic knowledge of formal concepts and methods useful within branches of information science. It forms the basis for studies in, among other things, databases, programming and artificial intelligence."

Other?
In my view, the most challenging aspect of the course (besides its large number of heterogeneous students) is the amount of different subjects/topics that need to be covered (hopefully properly) in a relatively short amount of time. As it stands right now, the course's contents include elementary logic and set theory, relations and functions, graphs and trees, combinatorics and probability, information theory and computability. I feel that, if one wants to provide the students with a reasonably proper understanding of all those contents, one needs more than the allocated fifteen 2-hour lectures. This seems to be the feeling of some of the students, as they reported in the course evaluation. But, instead of allocating more lectures or more seminar sessions, I feel a better solution would be to split the contents into two courses. One of them could contain mathematical foundations (e.g., set theory, relations and functions, combinatorics and probability) while the other could be more on the side of theoretical computer science (basics of propositional and first-order logic, graphs and trees, information theory and computability). Of course, I understand that it is an administrative challenge to split a course, and thus this idea is ot very feasible. Still, I think it is important to look at alternatives, to be sure the students get a proper understanding of all these topics, which are the basis for formal studies in artificial intelligence and information sciences.

Emnerapport / Course report ved / at Infomedia #121

Emnekode / Course code	INFO125
Emnetittel / Course title	Data Management
Semester	23H
Emneansvarlig / Course coordinator	GUOHUI XIAO
Sist evaluert (semester / år) / Last evaluation (semester / year)	2017

Hva er emnets undervisnings- og vurderingsform? / What are the teaching methods and forms of assessment used in the course?

The course is organized as 15 lectures every week. Each lecture lasts 2*45 mins. The lecture is given as powerpoint presentations. System demonstration with live coding is often provided when showing how the system/code is actually working. Selected high-quality short videos (~5min) from YouTube are played during the lecture

Mandatory tasks include 6 assignments, 5 of which must be approved in order to enter the exam. Lab tasks (not graded) are provided to students for further exercise.

The exam is 4 hours of written exam. It is an open-book exam. All paper-based materials can be used.

Oppfølging fra tidligere evalueringer / Follow up from previous evaluations

According to the database, the previous evaluation was done in 2017. The course has changed significantly since then. In particular, the proposal of dropping XML/XPath/XQuery and adding NoSQL database had already been implemented (around ~3 years ago).

Evalueringsmetode(er) / Form of evaluation	4 hours written exam

Sammendrag av studentene sin evaluering / Summarize the results from the student evaluation

- The instructor is very competent in the topic of the course
- Some students commented the lecturer had improved a lot compared with previous year in another lecture
- Some media- and interaction design students said the course is interesting and challenging, but can't understand why it's a required course for them.
- The textbook and several of the seminar exercises and assignments are too "US-centric". It would be better to have at least the exercises and assignments better suited to Norwegian situations/examples.
- The instructor cares about the students, and is alway ready to help students during the lecture or through email exchange.
- The syllabus is relevant in relation to the objectives and content detailed in the course description, and up-to-date
- The students learned a lot in the course

Emneansvarligs evaluering / The course coordinator's evalutaion
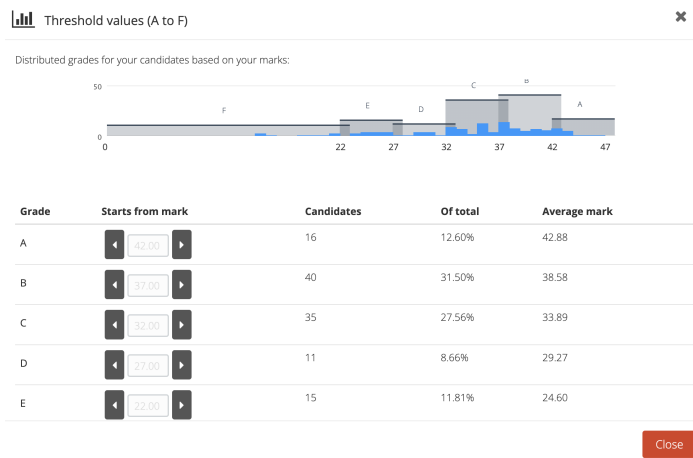
- The course materials (lecture notes and assignments) have been designed carefully. These materials have been updated from previous years to be more consistent and up-to-date.
- The courses are given in the lecture room physically. Attendance was not mandatory, but very helpful for students. The discussion with students during the lecture shows that the students are in general happy about the lectures.
- The presentation is done in an interactive way. Several students are often raising good questions. Such interaction is important to make sure the students understand the topic
- There are a lot of email exchanges between the students and the instructor. Normally the students receive replies in

a short time.
- The seminar leaders are working hard and the feedback from the students are positive.

Last opp karakterfordeling her
(Du finner den i Inspera, alternativt kan du ta kontakt med administrativ kontaktperson)

Upload the grade distribution here
(You'll find it in Inspera, you can also contact the administrative contact person)

Threshold values (A to F)		✖

Distributed grades for your candidates based on your marks:

Grade	Starts from mark	Candidates	Of total	Average mark
A	◀ 42.00 ▶	16	12.60%	42.88
B	◀ 37.00 ▶	40	31.50%	38.58
C	◀ 32.00 ▶	35	27.56%	33.89
D	◀ 27.00 ▶	11	8.66%	29.27
E	◀ 22.00 ▶	15	11.81%	24.60

Close

distribution.png

Evt. kommentar til karakterfordeling / Comments on the grade distribution
- There are 127 candidates in the exam. The grade distribution roughly follows normal distribution.
- The results showed that the students in general have a good understanding of the knowledge from the course

Mål for neste evalueringsperiode - forbedringstiltak? / Goals for the next evalution period - what can be improved?
- The topic of the transaction is taught in the Python programming part. This caused an issue of mixing the concept of the transaction itself and how to use Python API. In the future, it can be taught as a standalone topic.
- The examples used in the lecture and exercises can be revised to be less "US-centric"

Emnerapport / Course report ved / at Infomedia #122

Emnekode / Course code	INFO162
Emnetittel / Course title	Innføring i HCI
Semester	Høst 2023
Emneansvarlig / Course coordinator	Morten Fjeld
Sist evaluert (semester / år) / Last evaluation (semester / year)	Høst 2022

Hva er emnets undervisnings- og vurderingsform? / What are the teaching methods and forms of assessment used in the course?
Lectures
Assignments (in groups)
Project (in group)

Grading:
Project report (group)
Written exam (individual)

Oppfølging fra tidligere evalueringer / Follow up from previous evaluations
The course is continuously being improved within the team of teachers.

Evalueringsmetode(er) / Form of evaluation	written feedback

Sammendrag av studentene sin evaluering / Summarize the results from the student evaluation
The correspondence between the textbook content and the lectures could be further improved.

Some students appreciate the element of research in the teaching. Other student want to see exactly the textbook material lectured, and less research-oriented lectures.

Emneansvarligs evaluering / The course coordinator's evalutaion
The course is on good track.

It would be desirable if more of the students also come to the lecture. From approx. 140 students, mostly 20-40 students come to the lecture. This is not satisfying.

Mål for neste evalueringsperiode - forbedringstiltak? / Goals for the next evalution period - what can be improved?
Better correspondence between textbook and lectures.

Adjust the research-oriented content of the course to the expectations of the students.