Course analysis template

After the course has ended, the course leader fills in this template.

Course code	Course title	Credits
5HI020	Standardisation within health informatics	5
Semester	**Period**	
2	1	

Course leader	Examiner
Stefano Bonacina	Sabine Koch
Other participating teachers	**Other participating teachers**
Sabine Koch, Konstantinos Kalliamvakos, Rosario Silva	

Number of registered students	Number passed after regular session	Response rate for course survey (%)
39 (38 on CANVAS)	**33**	**38.46 %**
Methods for student influence other than course survey Feedback and comments on the schedule and the agenda, while the course is running.		
How will the results from the course analysis be communicated to students The results from the course analysis will be published on the programme website, as open pages.		

1. Description of any implemented changes since the previous course

Compared with the VT22 edition, VT23 5HI020 course was delivered in presence, with only some online lectures from international guest lecturers. Since the previous course CLIPS language was introduced, while time devoted to openEHR and GDL was reduced. Laboratory sessions to offer practical sessions, on installation, demonstration, and usage of the software tools were given in presence. A video tutorial was delivered for running Windows software on Mac computers.

2. A brief summary of the students' evaluations of the course

(Based on the students' quantitative answers to the course evaluation and comments. Quantitative compilation and possible graphs attached. Enclose results from the course evaluation)

Fifteen (15) out of 39 students have completed the course evaluation survey. Thirteen have clinical/medical education background, while two have “technical” education background. For each question of the survey, mean, standard deviation and coefficient of variation, as a percentage, are presented in Table 1.

In Table 1, the mean value of the answers varies from 3.2 to 4.4, while the standard deviation ranges from 0.6 to 1.1. Finally, the coefficient of variation ranges from 14.4 to 33.0 per cent. From those numbers, it appears that respondents' views are quite heterogeneous.

Table 1. Mean,standard deviation and coefficient of variation for questions of the survey.

#	Question	Mean	Standard Deviation	Coefficient of Variation (%)
1	In my view, I have developed valuable expertise/skills during the course.	3.4	0.7	21.7
2	In my view, I have achieved all the intended learning outcomes of the course.	3.3	0.6	18.2
3	In my view, there was a common theme running throughout the course – from learning outcomes to examinations.	3.3	0.8	24.5
4	In my view, the course has promoted a scientific way of thinking and reasoning (e.g., analytical and critical thinking, independent search for and evaluation of information).	3.4	1.1	33.0
5	In my view, during the course, the teachers have been open to ideas and opinions about the course's structure and content.	3.5	1.1	30.6
6	Teaching was based on real examples to develop students' professional knowledge.	3.8	0.6	14.8
7	This course built on knowledge I had acquired during the programme's previous courses.	3.2	0.9	29.4
8	My previous knowledge was sufficient to follow the course.	3.0	0.8	28.2
9	The course was challenging enough for me.	4.4	0.6	14.4
	Average	3.5	0.8	23.9

3. The course-responsible reflection on the course implementation and results

As for the implementation, the course was composed by six different parts, as follows:
- Introduction to standardisation and standards within Health Informatics, including some recaps on medical terminology (i.e., SNOMED CT, LOINC, UMLS).
- Health Level 7 standard, v.2.x, including an installation session of software to generate HL7 v.2 messages, a demonstration session, a practical session with exercises to do in groups, and submit as assignment.

- Fast Healthcare Interoperability Resources (FHIR) standard, including an installation session of software to generate and check FHIR resources, a demonstration session, a practical session with exercises to do in groups, and submit as assignment.
- OpenEHR standard, including an installation session of software to generate template and archetypes, a demonstration session.
- Guideline Definition Language (GDL v.2), including an installation session of the software, a demonstration session.
- C Language Integrated Production System (CLIPS) including an installation session of the software, a demonstration session, a practical session with exercises to do in groups, and to submit as assignment.

Guest lecturers gave lectures on standards organisations and their functioning (e.g., SIS, CEN, ISO standard development organisations), on the application of standards for implementing the Swedish eHealth Infrastructure (the last one was given as online course), and on OpenEHR adoption in specific European contexts (Catalonia, and Norway).

Course strengths:

1. Class activities and group works.
2. Standards applied in the real world (HL7 v2, HL7 FHIR, and openEHR)
3. Rehearsal of the exam.

Course weaknesses:

1. Overview of standardization in health information systems.
2. Duration / type of the Exam.
3. Composition of Final grade.

4. Other comments

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5. The course-responsible conclusions and any proposals for changes

(If any changes are proposed, please specify who is responsible for implementing these and a time schedule.)

In Table 2, reflections on weaknesses and proposals for changes are presented. Responsible for changes is the course director.

Table 2. Reflections on weaknesses and proposals for changes.

#	Topic/short summary	Teacher reflections	Actions for improvement
1	**Overview of standardization in health information systems**: "Having one more lesson where all the information/ connections to the other lectures"	The course is the continuation of some topic presented in the previous course "Computer application in Health Care and Biomedicine". Adding a lecture on standardization in health information systems for improving the connection among	A lecture on standardization in health information systems will be added.

		course topics is fine.	
2	**Duration / type of the Exam**: "The exam required more time".	The assessment as eight-hours long exam has been introduced to avoid co-operation. The requests for the exam are made according to the available time. In addition, a rehearsal of the exam is the occasion to test your own learning. However, only 9 out of 38 students submitted it.	Make the rehearsal "mandatory". Clarify that the time for the exam is for answering the questions, not for studying the topics (though learning materials can be used during the exam).
3	**Composition of Final grade**: "final grade should include points from group assignments".	Final exam assesses the actual knowledge of students, avoiding co-operation among students.	No action.