



Course analysis template

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

Course code 5HI001	Course title Computer Applications in Health Care and Biomedicine (10hp)	Credits 10
Semester 1	Period 2	

Course leader Stefano Bonacina	Examiner Sabine Koch
Other participating teachers Sabine Koch, Vasilis Hervatis	Other participating teachers

Number of registered students 40	Number passed after regular session 25	Response rate for course survey (%) 22%
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 Ping-Pong/Drupal websites, as open pages.		

1. Description of any implemented changes since the previous course

In the previous course evaluation, “I received critiques from the students, mainly concerning:

- Alignment with previous attended SUPCOM course;
- Student engagement and content delivery;”

For the first point, a specific teacher meeting has been devoted to define and implement actions for a smooth alignment of the courses. As some topics have been perceived quite new from the students, e.g. “object-oriented modelling”, it appears that some actions have to be taken. Please look at section 5 of this document for a description of those actions.

As for the second point, theoretical content of the lectures has been limited, while extensive time was devoted to class activities on the topics of the course. Sessions devoted to feedback on the work done by the students have been included in the agenda. However, it appears that feedback in written form would be preferable (compared to verbal feedback at the end of the class activities).

In addition, to strengthen the connection among courses, a workshop in the 5HI000 “Health informatics - needs, objectives and limitations” course was implemented. The workshop aimed at describing information needs of healthcare professionals during a typical working day. The



results of the workshop have been used a starting point of the class activities in this course (5HI001). The same approach will be followed for the next edition of the course.

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)

Twenty-two (22) out of 40 students have completed the course evaluation survey. No information on background education (clinical/technical) of the respondents is available in the survey. 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 ranges from 2.3 to 3.1, while the standard deviation ranges from 0.8 to 1.2. Finally, the coefficient of variation ranges from 30.0 to 47.4 per cent. From those numbers, it appears respondents' views are quite heterogeneous.

#	Question	Mean	Standard Deviation	Coefficient of Variation (%)
1	In my view, I have developed valuable expertise/skills during the course.	2.3	1.1	47.4 %
2	In my view, I have achieved all the intended learning outcomes of the course.	2.3	0.8	36.2 %
3	In my view, there was a common theme running throughout the course – from learning outcomes to examinations.	2.9	1.1	37.8 %
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).	2.5	1.0	38.5 %
5	In my view, during the course, the teachers have been open to ideas and opinions about the course's structure and content.	3.0	1.0	31.2 %
6	Teaching was based on real examples to develop students' professional knowledge.	2.5	1.0	37.8 %
7	This course built on knowledge I had acquired during the programme's previous courses.	2.7	1.1	38.9 %
8	My previous knowledge was sufficient to follow the course.	3.1	0.9	30.0 %
9	The course was challenging enough for me.	2.9	1.2	42.1 %



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

As for the implementation, the course was composed by four different parts, as follows:

- General part (Health informatics) (G), basic health IT tools to develop e-health systems, including medical terminology (e.g. vocabularies, classifications), and an introduction on standards for health informatics;
- Clinical Informatics (CI), health care organisations point of view, including Electronic health records and health information systems;
- Consumer Health Informatics (CHI), involving the patients as active components of the healthcare system, including current usage of mobile health apps, and how to evaluate their reliability;
- Public Health Informatics (PHI), a population level view, including different types of information systems to identify outbreaks.

Those parts included study visits and guest lecturers from external organisation. It appears that students have appreciated those.

As mentioned above, a workshop on healthcare information needs has been held in 5HI000 “Health informatics - needs, objectives and limitations” course, first course of the programme, to prepare a common defined starting point for class activities on modelling. The workshop was done for the first time in this edition of the course, improvements can be envisaged.

In the first three weeks of the 5HI001 course, practice sessions (including sessions for giving feedback) have been given to prepare the students for the first individual assignment, “Assignment 1 - General Part (G) + Clinical Informatics Part (CI)”. Class activities were performed by group works, and each group worked on the same problem. To improve students’ engagement and to have a variety of feedback groups can work on different problems.

Two entire days (10 hours) have been devoted to the group project, in the classroom, to help the students with the group assignment on Public Health Informatics, and the second individual assignment, “Assignment 2 - Consumer Health Informatics (CHI) + Public Health Informatics (PHI)”. Work group was done in pairs on public health heterogeneous topics defined by each group.

Course strengths:

Study visits and guest lecturers;
Class activity and Group project on Public Health;

Course weaknesses:

Deadline for the first assignment;
Connection with SUPCOM course;
Student engagement and teaching style;

4. Other comments



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.)

For the course, changes at syllabus level have been proposed by the Programme Director and the Examiner, to clarify aspects on submission deadlines and condition for re-examination. Then, the comments from the students and the reflections from the course-responsible allow updating some aspects to be implemented in the next edition of the course (semester HT20).

The deadline of the first individual assignment will be located on week 52/2020, tentatively 22nd December 2020. The deadline of the second individual assignment will be located on week 02/2021, tentatively 17th January 2020.

As for the alignment with SUPCOM course, continuing interactions with the teachers in that course, and additional sessions on how to translate a textual scenario into a conceptual model, within class activities, appear to be helpful. Additional literature can be suggested as well, for example “UML Distilled: A Brief Guide to the Standard Object Modeling Language”, by Martin Fowler.

Finally, for “Student engagement and teaching style”, topic for the class activities will be selected according to the needs of healthcare professionals, which also are students in the class. “Blended classroom” will be the preferred teaching style; however, if current situation persists, virtual classes will replace the concurrent presence of teachers and students in a physical environment. Virtual classes will be for the discussions of topics with students. Topics will be given as a short lectures (as videos) or reading materials, before the discussion sessions.