Dear Prof. Dr. Valentin Schwind,

this report contains the results of the course evaluation for Human Machine Interaction to questionnaire type "LVE_sem_e3":

In the first part of the analysis report the values of all individual questions are listed. Then you can find the individual average values of the scales specified in a line.

In the last part are the answers to the open-ended questions.

Please let us know if you have questions or suggestions for improvement for the evaluation (evas@fra-uas.de)

Yours
EvaS Team
Frankfurt UAS
1. Please specify how far you agree or disagree with the following statements concerning this course. Please cross only one box.

1.1) The structure of the course content is logical/comprehensible.

- Fully agree: 54.6%, 40.9%, 4.5%
- Disagree: 0%

1.2) The lecturer is able to make complex contents comprehensible.

- Fully agree: 45.5%, 50.0%, 4.5%
- Disagree: 0%

1.3) The course is taught in an interesting way.

- Fully agree: 50.0%, 45.5%, 4.5%
- Disagree: 0%

1.4) Discussions are well moderated (stimulation of contributions, thoroughness in answering to contributions, timing, halting of non-stop talkers).

- Fully agree: 50.0%, 40.9%, 8.1%
- Disagree: 0%

1.5) There is sufficient discussion/there is enough opportunity for questions.

- Fully agree: 40.9%, 45.5%, 4.5%
- Disagree: 0%

1.6) The course enhances my interest in my studies.

- Fully agree: 50.0%, 45.5%, 4.5%
- Disagree: 0%

1.7) The accompanying materials (scripts, bibliographies, internet, etc.) are helpful.

- Fully agree: 63.6%, 22.7%, 13.6%
- Disagree: 0%

1.8) The lecturer is sufficiently reachable outside the course times as well.

- Fully agree: 40.9%, 31.8%, 22.7%
- Disagree: 0%

2. Assessment of knowledge gains

The topic of the module/unit is interesting to me.
I know a lot about the topic of the module/unit.

2.3) This is my assessment after the module/unit.

<table>
<thead>
<tr>
<th>fully agree</th>
<th>fully disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>47.6%</td>
<td>22.7%</td>
</tr>
<tr>
<td>38.1%</td>
<td>18.2%</td>
</tr>
<tr>
<td>9.5%</td>
<td>18.2%</td>
</tr>
<tr>
<td>0%</td>
<td>31.8%</td>
</tr>
<tr>
<td>4.8%</td>
<td>4.5%</td>
</tr>
<tr>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

av.=1.8
dev.=1

n=21

I can apply the content of the module/unit.

2.5) This is my assessment after the module/unit.

<table>
<thead>
<tr>
<th>fully agree</th>
<th>fully disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>33.3%</td>
<td>9.1%</td>
</tr>
<tr>
<td>47.6%</td>
<td>14.3%</td>
</tr>
<tr>
<td>9.5%</td>
<td>14.3%</td>
</tr>
<tr>
<td>4.8%</td>
<td>28.6%</td>
</tr>
<tr>
<td>0%</td>
<td>23.8%</td>
</tr>
<tr>
<td>4.8%</td>
<td>9.5%</td>
</tr>
</tbody>
</table>

av.=3.4
dev.=1.4

n=21

3. Requirements and Workload

3.1) Was your previous knowledge sufficient to follow the course?

<table>
<thead>
<tr>
<th>too little</th>
<th>fully sufficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5%</td>
<td>15%</td>
</tr>
<tr>
<td>9.1%</td>
<td>36.4%</td>
</tr>
<tr>
<td>36.4%</td>
<td>27.3%</td>
</tr>
<tr>
<td>18.2%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

av.=3.6
dev.=1.2

n=22

3.2) How many lectures/seminars did you attend?

<table>
<thead>
<tr>
<th>0% (none)</th>
<th>100% (all)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5%</td>
<td>0%</td>
</tr>
<tr>
<td>0%</td>
<td>9.1%</td>
</tr>
<tr>
<td>9.1%</td>
<td>9.1%</td>
</tr>
<tr>
<td>36.4%</td>
<td>36.4%</td>
</tr>
<tr>
<td>40.9%</td>
<td>0%</td>
</tr>
</tbody>
</table>

av.=3.3
dev.=1.4

n=22

3.3) How would you evaluate the required preparatory work in relationship to the module content?

<table>
<thead>
<tr>
<th>low</th>
<th>high</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>30%</td>
<td>30%</td>
</tr>
<tr>
<td>35%</td>
<td>35%</td>
</tr>
</tbody>
</table>

av.=2.7
dev.=1.7

n=22

3.5) How much time do you spend per week for preparation and homework for this course?

<table>
<thead>
<tr>
<th>none</th>
<th>up to 1 hour</th>
<th>up to 3 hours</th>
<th>up to 5 hours</th>
<th>5 - 10 hours</th>
<th>over 10 hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>13.6%</td>
<td>27.3%</td>
<td>31.8%</td>
<td>22.7%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

n=22
4. Student contribution to the teaching quality and general conditions

4.1) Fidgeting, chatting, and disturbances of participants interfere with the course.

4.2) The students contributed to a productive working atmosphere.

4.3) The spatial conditions of the event are appropriate.

5. A few more things we would like you to tell us...

5.1) Which grade would you give this module/ unit

5.2) Are you an exchange student?
1. Please specify how far you agree or disagree with the following statements concerning this course. Please cross only one box.

1.1) The structure of the course content is logical/comprehensible.
   - fully agree
   - fully disagree
   
   n=22  | av.=1.5 | md.=1.0 | dev.=0.6

1.2) The lecturer is able to make complex contents comprehensible.
   - fully agree
   - fully disagree
   
   n=22  | av.=1.6 | md.=2.0 | dev.=0.6

1.3) The course is taught in an interesting way.
   - fully agree
   - fully disagree
   
   n=22  | av.=1.5 | md.=1.5 | dev.=0.6

1.4) Discussions are well moderated (stimulation of contributions, thoroughness in answering to contributions, timing, halting of non-stop
   - fully agree
   - fully disagree
   
   n=22  | av.=1.6 | md.=1.5 | dev.=0.7

1.5) There is sufficient discussion/there is enough opportunity for questions.
   - fully agree
   - fully disagree
   
   n=22  | av.=1.9 | md.=2.0 | dev.=1.0

1.6) The course enhances my interest in my studies.
   - fully agree
   - fully disagree
   
   n=22  | av.=1.5 | md.=1.0 | dev.=0.6

1.7) The accompanying materials (scripts, bibliographies, internet, etc.) are helpful.
   - fully agree
   - fully disagree
   
   n=22  | av.=1.5 | md.=1.0 | dev.=0.7

1.8) The lecturer is sufficiently reachable outside the course times as well.
   - fully agree
   - fully disagree
   
   n=22  | av.=2.0 | md.=2.0 | dev.=1.0

2. Assessment of knowledge gains

2.1) The topic of the module/unit is interesting to me.
   - This is my assessment after the module/unit.
   - fully agree
   - fully disagree
   
   n=21  | av.=1.8 | md.=2.0 | dev.=1.0

2.2) The topic of the module/unit is interesting to me.
   - This is my assessment before the module/unit.
   - fully agree
   - fully disagree
   
   n=22  | av.=2.8 | md.=3.0 | dev.=1.3

2.3) I know a lot about the topic of the module/unit.
   - This is my assessment after the module/unit.
   - fully agree
   - fully disagree
   
   n=21  | av.=2.0 | md.=2.0 | dev.=1.2

2.4) I know a lot about the topic of the module/unit.
   - This is my assessment before the module/unit.
   - fully agree
   - fully disagree
   
   n=22  | av.=3.4 | md.=3.5 | dev.=1.4

2.5) I can apply the content of the module/unit.
   - This is my assessment after the module/unit.
   - fully agree
   - fully disagree
   
   n=20  | av.=1.9 | md.=2.0 | dev.=0.9

2.6) I can apply the content of the module/unit.
   - This is my assessment before the module/unit.
   - fully agree
   - fully disagree
   
   n=21  | av.=3.3 | md.=3.0 | dev.=1.5

3. Requirements and Workload

3.1) Was your previous knowledge sufficient to follow the course?
   - too little
   - fully sufficient
   
   n=22  | av.=3.6 | md.=3.5 | dev.=1.2

3.2) How many lectures/seminars did you attend?
   - 0% (none)
   - 100% (all)

   n=22  | av.=5.0 | md.=5.0 | dev.=1.3

3.3) How would you evaluate the required preparatory work in relationship to the module content?
   - low
   - high
   
   n=20  | av.=4.6 | md.=5.0 | dev.=1.4

3.4) The workload corresponds to the ECTS earned in the module/unit (1 ECTS = 30 hours)
   - fully agree
   - fully disagree
   
   n=22  | av.=2.7 | md.=2.0 | dev.=1.7
4. Student contribution to the teaching quality and general conditions

4.1) Fidgeting, chatting, and disturbances of participants interfere with the course.

<table>
<thead>
<tr>
<th>fully agree</th>
<th></th>
<th></th>
<th>fully disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=22</td>
<td>av.=3,6</td>
<td>md=3,5</td>
<td>dev.=1,5</td>
</tr>
</tbody>
</table>

4.2) The students contributed to a productive working atmosphere.

<table>
<thead>
<tr>
<th>fully agree</th>
<th></th>
<th></th>
<th>fully disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=22</td>
<td>av.=2,3</td>
<td>md=2,0</td>
<td>dev.=1,5</td>
</tr>
</tbody>
</table>

4.3) The spatial conditions of the event are appropriate.

<table>
<thead>
<tr>
<th>fully agree</th>
<th></th>
<th></th>
<th>fully disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=22</td>
<td>av.=2,1</td>
<td>md=2,0</td>
<td>dev.=1,2</td>
</tr>
</tbody>
</table>

5. A few more things we would like you to tell us...

5.1) Which grade would you give this module/unit

<table>
<thead>
<tr>
<th>Excellent (1)</th>
<th></th>
<th></th>
<th>Very poor (6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=22</td>
<td>av.=1,5</td>
<td>md=1,0</td>
<td>dev.=0,7</td>
</tr>
</tbody>
</table>
## Outcome-based evaluation

**2. Assessment of knowledge gains**

<table>
<thead>
<tr>
<th>Time of survey</th>
<th>Perceived knowledge/ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>before the course</td>
<td>low (6)</td>
</tr>
<tr>
<td>after the course</td>
<td>high (1)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statements to be rated</th>
<th>Level of agreement</th>
<th>Percentage of students</th>
<th>CSA Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>The topic of the module/ unit is interesting to me.</td>
<td>1 2 3 4 5 6</td>
<td>0% 20% 40% 60% 80% 100%</td>
<td>58.97%</td>
</tr>
<tr>
<td>I know a lot about the topic of the module/unit.</td>
<td>1 2 3 4 5 6</td>
<td>0% 20% 40% 60% 80% 100%</td>
<td>57.69%</td>
</tr>
<tr>
<td>I can apply the content of the module/unit.</td>
<td>1 2 3 4 5 6</td>
<td>0% 20% 40% 60% 80% 100%</td>
<td>61.70%</td>
</tr>
</tbody>
</table>

Data presentation adapted from Raupach et al. Med Teach 2011; 33: e446-ee453.

Error bars indicate standard errors of the mean.
5. A few more things we would like you to tell us...

5.3) What did you especially like about this course?
- Everything is taught into detail so complex content can be understood
- I liked a lot of things which might be a grateful impression in my career
- I liked the approach to this course. It is vivid and teaches a lot of things that a master's student must know. How to write a research paper, literature review, how to conduct a study, how to think about conducting a study, a very elaborate study and helps in future with thesis also. Taught in an amazing manner by the professor.
- It is a great course to understand how to do research. A lot of information is given over methodologies both qualitative and quantitative. Opportunity to use the VR lab which is quite a great base for learning and enhancing ones understanding of real world applications.
- It is new and challenging. First thoroughly doing an actual scientific paper.
- Lectures, Project topics
- Professor
- The course is very different from the others. The professor is funny, always friendly, and provides a lot of information about working helpful to understand the topic.
- The interesting way of teaching is quite commendable. Positive feedback(proper guidance) is appreciated during the working on project.
- The professor is very approachable, makes the course interesting and has a sense of humor.
- There is a practical implementation of it on the projects that we are doing. Helpful in writing scientific paper and thesis
- The research projects offered are very interesting.
- This course was very helpful. This subject will not just help in this course but also in the master thesis.
- Topics and content
- very comprehensive and nice way of professor's teaching

5.4) Your suggestions for improvement:
- Good enough
- Improvement could be to have a little extra time in summer semester to finish the experiments as the user study is elaborate and would take time to come up with significant study results
- I think the professor's expectations are too much. Writing a complete scientific paper in just a semester for the first time. Is it possible?
- Maybe moving the course to a later semester? More time or another lecture to refresh statistics and scientific writing?
- More dynamic classes
- More research projects could be introduced to the students. Project and report timelines should be increased more
- My group members are lazy and did not do their part. Should be able to change the group.
- N/A
- Nahhh
- Need good seminars
- No need any suggestions because your teaching techniques are great?
- None it was great to be studying in this course.
- some mock tests
- Timeline for project could be more. Due to summer semester maybe, the time was less.
Would be to make the course more practical oriented, but doing some excavations or surveys and analysing the results