## Evaluation of the diploma thesis reaches the following level:

<table>
<thead>
<tr>
<th>Evaluation criteria of thesis</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Their objectives and appropriateness of the content structure thesis in terms of a given topic (performance specification). ((0 - 30))*</td>
<td>28</td>
</tr>
<tr>
<td>2. Theoretical level and the use of available literature in the thesis, ((0 - 30))*</td>
<td>28</td>
</tr>
<tr>
<td>3. Range of experimental work (SW, HW), applied knowledge and knowledge level processing methodology and conclusions of this work. ((0 - 30))*</td>
<td>28</td>
</tr>
<tr>
<td>4. Formalities and finish thesis (level writing, markings structure of the text, graphs, tables, citations in the text, bibliography, etc.). ((0 - 10))*</td>
<td>8</td>
</tr>
<tr>
<td>5. Total points</td>
<td>92</td>
</tr>
</tbody>
</table>

*In case of further comments carry on the overleaf

### Proposal issues for defence

1. 
2. 
3. 
4.
The overall assessment of the level elaboration of the diploma thesis:

<table>
<thead>
<tr>
<th>A (excellent)</th>
<th>B (very good)</th>
<th>C (good)</th>
<th>D (satisfactory)</th>
<th>E (sufficient)</th>
<th>F (failed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-90 points</td>
<td>89-80 points</td>
<td>79-70 points</td>
<td>69-60 points</td>
<td>59-50 points</td>
<td>&lt; 50 points</td>
</tr>
</tbody>
</table>

** - check the appropriate classification level, in the case of evaluation of F (fail), please provide detailed comments

Diploma thesis was evaluated at classification level ...A..... mentioned above.

Comments

The objective of the masters thesis is to construct the perfusion/ cultivation chamber. Most of the results reported in the text are in designing the electronic device, equipped with several sensors. The hardware and software of this device controls the cultivation chamber. Part of the thesis are experiments with the cultivation chamber. My review of the thesis focuses on the part of the project within the subject of electrical engineering and hardware and software design. I put its interdisciplinary connections a bit aside.

From the formal point of view the thesis looks good. Its English language level is satisfactory (as far as I can judge as I am not a native speaker). Several minor typos and grammatical errors are present.

I grade the thesis with the A mark. My conclusion is that the thesis reports on a substantial and original work results of the sole author of the thesis.

Minor points

In general, Figures are poorly annotated, mostly by giving Figure the title. No further descriptions or legends, or credits in case of reprinted Figures are given. (Figs 2.1, 2.2, etc look like reprinted.) Many Figure titles are a bit too sketchy.

Further examples: Figures 4.12 and 4.16 just show messy setups on a work bench or in a thermostat, containing peristaltic pump, hardware device and many other paraphernalia... I guess some of Figures in Results section are print-screens from the supporting software. Some (like Fig. 5.3.) are poorly annotated. Sometimes showing less Figures (like for example omitting 5.10, 5.11, 5.12) would leave a better impression. Some Figs are better, but good examples are hard to find, like Fig. 5.7...

Some literary references in the text do not have corresponding items in the list of references (like: (Wikipedia, 2016) on page 40).

Questions for the defense:

1. The author of the thesis should clearly state, what was his contribution to the project.
2. What part of this work and what particular solutions to realization problems he values most?
3. What was the main obstacle to realization works?

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Signature:
Date: June 13, 2016