

I. PERSONAL AND STUDY DETAILS

Student's name: **Bar Noa** Personal ID number: **453867**
 Faculty: **Faculty of Biomedical Engineering**
 Study program: **Biomedical and Clinical Technology**
 Branch of study: **Biomedical Technician**

II. EVALUATION OF THE BACHELOR THESIS

Bachelor's thesis title in English:

Correlation between weight distribution and center of pressure with spinal alignment using Nintendo Wii Balance Boards and Kinect V2 camera

	Evaluation criteria	N. of points
1.	Attitude of the student (preparation, initiative, work morale and independence). (0 - 30)* Full points can be given to a student who had a long-term, systematic and independent approach to the bachelor thesis with a clear vision of the solution. Supervisor of the diploma thesis can decrease the number of points in case of insufficient activity, unsystematic work which was not conceptual and if the student was looking for the easiest solution.	16
2.	Manner and level of elaboration of the thesis and fulfilment of the assignment. (0 - 30)* Consider creative attitude as well as the ability to look for professional resources. Give full number of points if the theoretical part of the bachelor thesis is of a high level and corresponds with the requirements of the practical part. In case of insufficiency of the theoretical part, decrease the rating by up to 15 points. In case of insufficiency of the practical part, decrease the rating by up to 15 points.	17
3.	Scope of experimental work (SW, HW), applied knowledge, publications and other activities, including awards connected with the topic of the thesis. (0 - 30)* Maximum number of points can be granted to a thesis which is fit for publishing. This aspect is judged with respect to enhancement of theoretical knowledge and practical implications. Creation of a model, SW or technical realization is valued. For minor methodological flaws, the assessment is reduced by up to 5 points. Inconsistency of elaboration with the theoretical background and unclear or not fully professional approach leads to a reduction by at least 15 points. Another decrease can be due to insufficient discussion. A total of 30 points can be given to a very complex and flawless work, including other activities such as participation in scientific-research project or grant, active participation in the writing publications, patents and utility models.	22
4.	Formal requisites and layout of the thesis (writing mastery, structuring, graphs, tables, citations in the text, list of references etc.). (0 - 10)* Supervisor judges formal requisites with respect to rules of writing, attributes of final works i.e. text formatting, structure of the thesis, list of references, graphs and tables, manner of citation. 2 points are subtracted for each noncompliance. 2 - 4 points are subtracted for grammatical mistakes, spelling mistakes, improper stylistics and terminology. Only standard terminology should be used especially in the English language (ability to express oneself with the use of professional language should be judged - 2 points), if graphs are created according to the rules (see tolerance and influence of statistical processing - 2 points), if there are relevant captions for graphs and tables and that everything is readable (2 points), citation rules ISO690 and ISO690-2 are observed (2 points).	6
5.	Total points	61

* Verbal evaluation should be part of the Comments.

III. THE OVERALL ASSESSMENT OF THE LEVEL OF THE BACHELOR THESIS

Grade**:	A (excellent)	B (very good)	C (good)	D (satisfactory)	E (sufficient)	F (failed)
Number of points:	100 - 90	89 - 80	79 - 70	69 - 60	59 - 50	< 50
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>

** in case of F (failed) please explain in detail

I give the above grade to the bachelor thesis and I recommend/~~do not recommend~~ it for the defence.

IV. COMMENTS

Student Bar Noa in her first theoretical part deals with disorders of spinal shape and the possibilities of using Optical Motion Capture systems for the needs of measuring the spine shape. Theoretical analysis is logically arranged especially with the respect to Optical Motion Capture systems, but the drawback is the lack of information about use of stabilometric platforms for measuring weight distribution.

In the practical part, the student created an algorithm for recording data from two Nintendo Wii Balance boards and Microsoft Kinect V2 camera. This algorithm was verified on a data set of 15 healthy probands with different platforms positions.

The chapters Methods and Measurement procedure are clearly described and especially the use of own images helps to understand the problem.

Statistical analysis includes the use of standard tests including the normality test, but in some cases the Result chapter does not use the potential of the measured data. Fig. 3.3 should include at least trendlines. On the other hand, the Confidence Ellipse is well used, but it is not statistically evaluated depending on the position of the platforms.

The discussion includes comments on the results and problems with connecting the platforms to the student PC. This problem was one of the causes that reduce the quality of work, particularly with regard to the processing of the results because of the delay of work.

Although the work is short, the application of the methods was done correctly and one of the outputs was also the submission of the article „Design of a hybrid portable system for measuring the position of the spine, the center of gravity of the body“ at the conference Medicon2019, where the student is the co-author.
Therefore, I recommend the thesis for the defense with evaluation D (satisfactory).

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Signature:

Date: