

Practice tests in biophysics (2.LF UK)/2018-19

Introduction

The creation of practice tests in biophysics is one of seminar projects of students of the 1st year of General Medicine at the 2nd LF in the academic year 2018/19. In this academic year '2018/2019 circles participate in the creation of tests that are available to logged in users on the Moodle website 1, 2, 4, 7, 8, 9, 10. The topics of the individual tests are based on lecture topics and practice.

The tests are available in the moodle course after logging in: **Testy z biofyziky / Tests from Biophysics (<https://dl1.cuni.cz/course/view.php?id=6463>)**

The keys to enroll in the course are the same as the keys for the course D01010332 Biophysics, Master's degree in medicine 2018/19 (<https://dl1.cuni.cz/course/view.php?id=6451>), which were communicated to you in the introductory biophysics seminar (each work team has a different key).

WARNING: Since the tests have not yet been professionally proofread, they may contain errors and erroneous or inaccurate information. The tests are designed to verify how students understand the lectures and how prepared they are for the practical exercises. However, when preparing for the exam in the subject Biophysics, the individual questions and answers should be further consulted with professional literature to guarantee the correctness of the given information.

Wikiscriptors

Circle wikiwriters / other users assigned the role of ``Teacher

- Circle 1 - Veronika Mattová
- Circle 2 - Michal Hlava, Matěj Menci
- Circle 4 - Matyasnovak (Matyáš Novák), Vladimír Máslo
- Circle 7 - Coach (Ondřej Ferra), Magdaléna Jelenová
- Circle 8 - Jana Čorňáková, Patrik Bolvari
- Circle 9 - Viktor Pavlík, Marťas (Martin Šimčík) / Kabeliková (Anna Kabelíková), Lackovaba (Lacková Barbora), NikolaZ (Nikola Zálešáková), Root (Natanael Bretyš), Tereza Pekárková
- Circle 10 - Benjamín Škaloud, Kryštof Růžička

Table for organizing test editing on Moodle

(Inclusion of a table from the page User:Coach/Table for the organization of test editing on Moodle)

User:Coach/Table for organizing test editing on Moodle

Role

We use two basic roles in the moodle course - similarly to the course D01010332 Biophysics, Master's degree in medicine 2018/19 (<https://dl1.cuni.cz/course/view.php?id=6451>):

- Student
- Teacher

Anyone assigned the role of "Student" can freely run individual tests and try them, but cannot create and edit these tests themselves in the course - only those with the role of "Teacher" can do that.

The ``Student role is automatically given to anyone who enrolls in the course with the same key that they have in the course D01010332 Biophysics, Master's Degree in Medicine 2018 /19 (<https://dl1.cuni.cz/course/view.php?id=6451>) - keys are derived from your work teams. As a result, the correct "group" will automatically be assigned. All students should do this. All students (even those who did not choose creating biophysics tests as a seminar work) should participate in the final phase of testing these tests - i.e. try them and provide feedback to their creators so that all errors and ambiguities can be gradually caught etc.

Whoever has the role of ``Teacher can assign the same role of ``Teacher (theoretically) to any participant with the role of ``Student. We have assigned the role of ``Teacher to circular wikiwriters, who should be the first to familiarize themselves with the functioning of this course Testy z biofyziky / Tests from Biophysics (<https://dl1.cuni.cz/course/view.php?id=6463>)

It then depends on the agreement between the wikiscriptors and other students involved in the project, to whom the wikiscriptor will also assign the role of ``Teacher so that they can edit tasks in the ``Task Bank themselves. It is not an entirely simple matter, and someone who starts creating tests on moodle too hastily could easily do more harm than good. It is necessary to spend enough time to familiarize yourself with how the different types of tests

work here and how the organs are invited. Those students who do not dare to do such a job will therefore ask their wikiwriter or another colleague with the role of "Teacher" to insert the tests they have created into the course. And the wikiwriters will consider carefully who they assign the role of "Teacher". *Prorož, they are responsible for the fact that there will be order in the course and not maglajz (which is already constantly arising to some extent).*

Job Bank

Whoever has the role "Teacher" has access to the task bank, in which all tests are stored:

- We click on the gear wheel in the upper right
- Last gear selected in menu *More...*
- This will take you to the "Course Management" page
- Below is a link to the *Job Bank*
- First you need to familiarize yourself with the categories, so we click on *Categories*

Category

Of course, test questions and tests must be created in the appropriate categories.

The default category is:

- Default in BF-tests

No tests should be stored in this category. If they are (as they are), it is a mistake that needs to be corrected (ie recategorized) first.

The category *Default in BF-tests* is further divided into two subcategories:

- Czech
- English (it is still empty, no one has started adding English tests yet)

There shouldn't be any tests in these subcategories either (fortunately, there aren't yet).

The subcategory *Czech* (as well as *English*) is further divided into two further subcategories:

- Lessons (i.e. lectures, English *Lectures*)
- Practicals (English *Practicals*)

And only in the other subcategories should appropriate tests be assigned - see below:

Lesson

Tests for individual lessons (lectures):

- 1) Biomechanics
- 2) Optics
- 3) Electricity and magnetism
- 4) Biophysics of vision
- 5) Physical principle and application of lasers and microscopic techniques in medicine
- 6) Acoustics
- 7) Thermodynamics & Bioenergetics
- 8) Biophysics of cells and tissues
- 9) Biophysical methods in regenerative medicine
- 10) Imaging and therapeutic methods using ionizing radiation
- 11) Biosignals
- 12) Fluorescence and advanced optical methods in medicine
- 13) Biophysics in nanobiotechnologies

Practice

Tests for individual practitioners

- 1) Polarimetry
- 2) Electrocardiography
- 3) Perimetry
- 4) Spectrophotometry
- 5) Audiometry
- 6) Ultrasonography
- 7) Radioactivity
- 8) Doppler sonography
- 9) Optometry
- 10) Evoked potentials
- 11) Basic physical examinations
- 12) Ergometry

Comments

Please **read, follow and comment on the discussion page:**
Discussion:Cvičné_testy_z_biofyziky_(2.LF_UK)/2018-19

Question Types

These tests should primarily be used so that students can discuss the basics themselves and find out the areas in which they do not understand the material very well. Therefore, it would be good if the tests included a range of questions in approximately the following order, e.g.:

Lecture tests

1. Review of high school physics, related to the topic
2. New theoretical insights from biophysics
3. Practical use in medicine (diagnosis, therapy)
4. Comparison of different methods (within the topic of the lecture)
5. Relationship to the topics of other lectures (e.g. ultrasound examination vs. X-ray, etc.)

Practice Tests

1. Review of high school physics, related to the topic
2. Theoretical questions, discussed at the lecture
3. Utilization of the given method in the device, device construction
4. Objectives of examination or measurement
5. Preparation and prerequisites for proper examination or measurement
6. Expected results, ranges of possible values, standards
7. Possible deviations of the examination result, artifacts, influence of interference, etc.
8. Relation to other tasks

Timeout

It would be necessary to unify the time limit for various tests a little - it is mainly by mutual agreement of the wikiwriters, who should communicate with each other. We can assume that in both the entrance exams and the exam tests, a time limit of 1 minute/question is calculated on average - in these cases, they are multichoice tests with four answer options, for other types of tests, the times need to be adjusted accordingly.

Review Procedure

It goes without saying that the submitted work should first of all be "read" by the authors themselves - i.e. try the test yourself. After them, the wikiwriters who are responsible for this area - and at least some reaction to be the first to enter the relevant discussion. Then the test should pass the check of classmates - that was, after all, the main reason why they enrolled in this course as students. And only after these initial checks should you dare to give the tests to the teachers for revision. We will try to summarize briefly:

1. Tests are passed by their authors, they organize a review of their wikiwriter
2. Wikiwriters pass the tests and write at least some comments and their evaluation in the relevant discussion group
3. Each of the tests is passed by at least 20 classmates (they can be from different circles), at least half of them should react in the relevant discussion forum (at least in such a way that, for example, the test is nice and without other comments).
4. After these preliminary checks, the test will be handed over to the teachers for checking - the request will be entered in the above table with the indicated date.

!!! Serious warnings!!!

Wrong categorization

Template:Ping Dear and dear friends, what I have warned against and feared is already happening in full force! The main reason is that even the wikiwriters with the role of ``Teacher *don't really read what they are supposed to do, and then we get a crazy mess. Therefore, I declare a **STOP STATUS**' with the insertion of more questions until this Augiáš sty is swept away. Deadline: By the end of this week, i.e. 2018-12-09. Whoever doesn't fix it after himself, his posts will be "mercilessly swept away" and he will insert everything again, this time correctly.*

What's going on? Of course - *categorization*. As I boasted the day before yesterday that we have a clean "Default in BF-tests" category, today there are "61" tests - mostly from the 9th circle:

- Anna Kabelíková (in addition: Meaningful question names are not provided)
- Barbořa Lacková
- Martin Šimčík (in addition: Meaningful question names are not provided)

Please, please, really please: Don't do it. Please, please, recategorize all of this into the places it belongs! Thanks, thanks, warm thanks in advance!

%5Cbank%5Cquestion_name_column Task bank Tasks Category: Default in BF-tests (https://dl1.cuni.cz/question/edit.php?courseid=6463&cat=17685%2C530221&qpage=0&qperpage=1000&recurse=0&showhidden=0&qbshowtext=0&qbs1=core_question%5Cbank%5Ccreator_name_column-timecreated&qbs2=core_question%5Cbank%5Cquestion_type_column&qbs3=core_question)

Kychot (Petr Heřman, 2. LF UK) 6/12/2018, 07:53 (CET)

Now I looked in the database and even after the warning mentioned above, there were 20 more poorly named and poorly categorized (or rather uncategorized) tests. If you don't check your own talk pages regularly, please have your profiles set up to send you notifications. And at least include this coordination page among the pages you follow (and of course also the page of your circle). Thank you.

Kychot (Petr Heřman, 2. LF UK) 7/12/2018, 11:15 (CET)

Missing groups

Please respect the standard procedure for enrolling in the course (see above in the **Role' section**). *I.e. Each student first enrolls himself in the course as a student (using the well-known "same" key assigned to him according to his group - as he enrolls in our normal course) and only then* is he possibly assigned the role of *Teacher*.

Many teachers ignore this procedure and enroll their colleagues in the course directly, without having previously registered as students. As a result, they are not automatically included in the appropriate group and you have to do it afterwards. Therefore, please correct all those who are not in any group! Without it, it is difficult to find out how which circle works and it greatly complicates the possible awarding of credits.

Thank you!

Kychot (Petr Heřman, 2. LF UK) 7/12/2018, 11:30 (CET)

Front page

The front page Testy z biofyziky / Tests from Biophysics (<https://dl1.cuni.cz/course/view.php?id=6463>) clearly shows the work on tests in individual areas, what was done in previous years and what was added this year .

The task was:

1. Check and correct possible errors in all tests that were created in previous years
2. Add more tests

As it seems, neither the old tests nor the new ones are checked by anyone! In order for a battery of tests to be considered reviewed, at least 25 other students (in addition to its creators and wikiwriters) would have to take the test and summarize their evaluations on the relevant talk page (that's where the talk pages are from). The task of wikiwriters and test creators is then to evaluate the statistics of completed tests, to think about it (e.g. if the large number of errors in some questions is caused by the ignorance of the students or incorrect or unclear wording) and to correct any shortcomings.

On the other hand, it happened that for several topics, some of the "teachers" deleted the batteries of tests from previous years, over which reason remains. If you are tasked with taking tests from previous years, how can you delete them from the main page? I don't really understand this intention. If it was a mistake, please correct it immediately. If there was any intention in this, please explain this intention. Thank you.

Kychot (Petr Heřman, 2. LF UK) 9/12/2018, 22:49 (CET)

I've been trying to analyze the logs for a few hours now, and the most suspect seems to me to be User:Coach (Ondřej Ferra) from the 7th circle, who ran amok there the most on December 7-8 and did everything wrong. It is so?

Kychot (Petr Heřman, 2. LF UK) 10/12/2018, 02:22 (CET)