

Credit calculation

Ágnes Vámos, Sándor Lénárd, András Németh and Éva Szabolcs

The main point of credit calculation is to evaluate the quantity and quality of the working time expended by the PhD student through their activity. The following proposal is the first version prepared for the Council of the Doctoral School (CDS). Its introduction concerns the school year 2016/2017, and it applies to students admitted according to the new system in a phasing-out system. Students, who were admitted in previous years, that is the current second- and third-year students can count credits according to the former credit chart.

The present document is a proposal for the CDS, which is open for debate. The proposer group utilizes the incoming opinions. We will collect the experiences about the document to be introduced after the first calculation round, and we will organize a discussion under the CSD towards specification and necessary revision.

The principles concerning the completion of a credit calculation:

1. The credit should be *approximately* commensurate with the activity belonging to it. Using a foreign language, the international sphere as well as relationships beyond the doctoral school provide a greater value in case of the particular activity.
2. The activity rewarded with credits should endorse the development of scientific research competencies, therefore the credit signifies not merely the invested working hours, but at the same time the entire professional improvement (e.g. autonomy, reliability) and creativity.
3. Credits are structured in the following groups according to the regulation of the study program:
 - a. *Group of research credits*. Total number of credits to be earned: 72
 - i. Scientific research block
 - ii. Knowledge sharing block
 - b. *Group of credits related to the completion of a dissertation*. Total number of credits to be earned: 20
 - c. *Group of credits related to publication*. Total number of credits to be earned: 20
 - d. *Group of credits related to education*. Total number of credits to be earned: 44
 - i. Education block
 - ii. Block of training-operation and –development
4. Determining credits was based on previous experiences of the Doctoral School, on the Faculty's principles, on documents about research ethics (http://www.ppk.elte.hu/file/publikacios_alapelvek_PPK.pdf) as well as on the list of periodicals published by the Pedagogical Scientific Committee of the Hungarian Academy of Sciences' II. Department (http://mta.hu/data/dokumentumok/doktori_tanacs/II.Osztaly/Doktori_Folyoiratlista_PETB_II_osztaly_201605.pdf), our work was furthermore inspired by the description of levels Nr. 8. of learning

outcomes/competences describing the highest qualification in the Hungarian and European Qualifications Framework. Consequently, we endeavored to define the characteristics of competency-development in the blocks within the credit groups with the indicators of knowledge, competencies and attitudes. We signified these with spots. The units are cumulated in alphabetical order.

5. Complex tasks can be scored with credits belonging to several credit groups, if the adherent learning outcomes appear separately.
6. The necessary amount of credits can be obtained by means of fractional credits as well.

Credit calculation charts

Special principles regarding the group of research credits:

1. Defining the concept of research group is the responsibility of the CDS
2. Defining the concept of knowledge sharing is the responsibility of the CDS
3. Maximum credits come under the research obtained within the framework of an international cooperation or a standard, independent national research competition.

| Group of research credits | Max. credits | Remarks | Learning outcomes (competency in general, which the PhD student acquires after a specific activity) |
|-------------------------------------|--------------|--|--|
| 1. Scientific research block | | | |
| A | 1 | Approx. 30 man-hours Observation in a research group or a department | <ul style="list-style-type: none"> • Is in the know about the internal composition of the research group as well as about communication characteristics. Is familiar with a research program or plan and its structure. • Is able to highlight the main points and traits of the research group in the course of getting familiar with it as well as to prepare memorandums/reports. • Is open to work in cooperation. Is interested in tasks requiring research. |
| B | 5 | Smaller tasks, e.g. tender watch, the preparation of a tender plan, the arrangement of literature, annotation, coding, interview-making, tool-making Supporting the research group or department with smaller tasks | <ul style="list-style-type: none"> • Is familiar with the structure and guidance of the research/tender process. Knows, what kind of knowledge he/she has by having accomplished the task, and what he/she needs to develop further in a self-regulated manner. • Is capable of executing a smaller part of the research under guidance, and is able to see the place of this part in the research as a whole. • Is open to getting familiar with the characteristics of the research. |
| C | 10 | An activity, which requires analytical and synthetic tasks, must be included. Major task as a research assistant | <ul style="list-style-type: none"> • Is familiar with the structure and guidance of the research process, with the participants' role and responsibility, is fundamentally well informed about the research topic. • Is capable of performing specific research tasks under guidance. Is able to perceive their knowledge and skill deficiencies. • Accepts that a research consists of specific, interrelated tasks, and is aware of their role in the shaping of their own research competencies. |

| | | | | |
|---|---|----|--|---|
| D | Continuous tasks as a research assistant | 15 | Longer period of time, its intensity may be variable, its criteria are autonomy and responsibility. The student represents the guide in smaller tasks. | <ul style="list-style-type: none"> • Is familiar with the structure and guidance of the research process, with the participants' role and responsibility as well as with the circumstances affecting the realization of the research. Is acquainted with the planning of the aspects of research strategies, methods and tools. Understands the topic. • Is able to accomplish tasks, which support a research or a group autonomously, including making reports. Is capable of providing support for the research planning, for the establishment of its methodology and instruments. Is able to accompany their own learning with reflective analysis. • Serves the successful realization of the research according to ethical aspects in science, and understands the significance of resource management. |
| E | Cooperation in a research group/with a research mate as a co-researcher | 15 | Is characterized by cooperation, supporting each other, responsibility and confidence, with a product. | <ul style="list-style-type: none"> • Knows and understands the steps required for the realization of the research. Is familiar with the aspects of research strategies, methods, tools and planning, and is able to conduct research in the framework of a positive partnership. • Is capable of creating a joint product under cooperation, professional dialogue and discussion. • Accepts that a research consists of specific, interrelated tasks, and that joint success is based on mutual openness, tolerance and professional communication. |
| F | Completing independent research work | 25 | An activity resulting in a product (e.g. a research report) and supported by research methodology. The credit value reflects the activity practiced in the research process. If a publication is prepared as well, it can be evaluated and rewarded with credits separately. | <ul style="list-style-type: none"> • Is familiar with and understands the steps necessary for the realization of the research. Is well informed in the field of research paradigms, methods and tools. Is in the know about relevant aspects of ethics in science. • Is able to make a research plan, to analyze the problems arising, to look for decision alternatives, to decide, to realize and to evaluate results. Relates to their own work reflectively. • Accepts, that a research consists of specific, interrelated tasks, between which there is a professional and logical relationship. He/she accepts that the research serves the commonweal. |
| G | Leading a research team, workshop or research group | 25 | E.g. conducting a research in a student group or coordinating subthemes in a research group. | <ul style="list-style-type: none"> • Understands the aspects, which affect the choice between different research concepts and paradigms, the characteristics of a group's operation as well as various leading styles. Is familiar with the relevant research antecedents and trends of their scientific discipline. • Is capable of making a research plan as well as of defending it as part of an argumentative debate. Is competent at leading a research as a whole and the group |

| | | | | |
|--|--|--|--|--|
| | | | | <p>members individually, at supporting the members' studies as well as at conducting the resolution of collective and individual research problems.</p> <ul style="list-style-type: none"> • Represents the current norms of science and research ethics exemplarily, and is committed to continuous professional communication and joint success. Is committed to professional community building as well as to the effective utilization of resources. The student represents, that the research serves the commonweal. |
|--|--|--|--|--|

2. Knowledge sharing block

| | | | | |
|---|---|----|---|---|
| A | Copy editing and/or formatting tasks on a knowledge sharing platform | 3 | With completed publications or work related to publication. | <ul style="list-style-type: none"> • Is aware of professional and general expectations regarding publications. • Is able to relate to the work of others critically, under supervision. • Accepts that there is a specific knowledge sharing in the scientific world. |
| B | Assistance tasks under the organization of a conference/professional event/professional knowledge sharing platform (newspaper, website, blog) | 5 | Organizational, preparatory, editorial, marketing and housewife-tasks, the support of executives, organizers and/or participants. | <ul style="list-style-type: none"> • Knows the process of conference organization and organizational tasks. • Is able to work in cooperation, to accomplish their task in line with others under guidance. • Realizes the role of the conference or event in their own discipline, and understands that their part of work is connected with the success of the whole conference responsibly. Is aware of the resources' role. |
| C | Organizational tasks under the organization of a conference/event/ knowledge sharing platform | 10 | Independent resolution of certain task units, including reporting. | <ul style="list-style-type: none"> • Is familiar with the types of knowledge sharing and knowledge acquisition as well as with the algorithms of their functioning. • Is able to guide their colleagues, to maintain professional cooperation with them, to communicate with partners independently, under reporting. • Accepts that the sharing and communication of knowledge is the basis of accountable scientific dialogue. Complies with ethical norms and uses the resources responsibly. |
| D | Managing separate conferences/events/ knowledge sharing platforms | 20 | Establishment and management from the phase of planning to realization. | <ul style="list-style-type: none"> • Is acquainted with and understands the main elements of the written (offline, online) and social media's, the public professional spaces' and forms' functioning as well as the typical places and operating mechanisms of scientific knowledge sharing and -communication. • Is capable of facilitating its operation and of handling form and/or content. |

| | | | | |
|--|--|--|--|---|
| | | | | <ul style="list-style-type: none"> Represents, that the sharing and communication of knowledge is the basis of scientific dialogue, and that he/she is an accountable participant in the process of shaping its ethical norms. |
|--|--|--|--|---|

| | | | |
|--|---|----|--|
| | Total number of credits required in the research credit group | 72 | |
|--|---|----|--|

Specific principles concerning the „Preparation of dissertation and open debate” credit group:

- In this credit group, the credits belonging to the complete and final preparation of the dissertation cannot be calculated (because that would mean more orders of magnitude greater number of man-hours, than 20 credits), those tasks however can be calculated, upon which the dissertation is based.
- The big diversity of the activities belonging to the “Preparation of dissertation” credit group is handled by the “Other” category, the content of which is controlled from time to time by the CDS.

| | 3. Preparation of dissertation and open debate credit group | Max. credits | Remarks | Learning outcomes (competency in general, which the PhD student acquires after a specific activity) |
|---|--|--------------|---|---|
| A | Participation in an open debate or a public thesis defense | 1 | Preparing reflection on their own learning process. Active participation in the open debate, e.g. reflection, questions prepared prior to the debate. | <ul style="list-style-type: none"> Is familiar with the doctoral procedure. Is able to interpret the doctoral procedure of other PhD candidates in a reflective manner. Is open to evaluate the outcomes of others. |
| B | Consultation with the supervisor and the programme leader | 8 | Planning and evaluating the implementation of research, learning and publication activities 2 ECTS/semester. | <ul style="list-style-type: none"> Knows their personal competencies necessary for planning their own studies as well as the possibilities of progress. Is acquainted with the tasks and responsibility of the consultant towards their own student as well as student rights and the possibilities of the protection of interests. Is capable of learning continuously and in a self-regulated manner. |

| | | | | |
|---|--|----|---|---|
| | | | | <ul style="list-style-type: none"> • Is committed to cooperation and aware of their personal responsibility. |
| C | Preparation of a research plan | 15 | Learning about the research plan and dissertations of other students. | <ul style="list-style-type: none"> • Is familiar with literature of the research plan's preparation, is able to interpret their relation with their own research, and possesses the basic information in the field of research strategies, paradigms, methods and tools. • Is capable of preparing a coherent research plan regarding their own subject. • Sees and accepts the changing role the research plan in the research process. |
| D | Assuming sub-tasks in the evaluation of a dissertation (assisting an opponent) | 5 | Assisting in the evaluation of some elements of a completed dissertation. | <ul style="list-style-type: none"> • Understands the role of criticism in the defense process. • Is able to perform analytical work in a subdivision (e.g. research methodology, a chapter of the scientific literature), under strict supervision. • Accepts the ethical norms related to participation. |
| E | Preparation of dissertation for the open debate | 14 | In cooperation with the consultant. | <ul style="list-style-type: none"> • Knows the stylistic features of the dissertation as well as its characteristic structure. • Is able to prepare the dissertation. • Is conscious of excluding plagiarism and complying with ethical norms in science. |
| F | Organizing the open debate, evaluation, plan for further steps | 1 | In accordance with the requirements of the doctoral school. | <ul style="list-style-type: none"> • Is familiar with the procedure of organizing an open debate. • Is capable of presenting their own research outcomes, of collecting opinions , and of interpreting, whether those factors will fit in their own further work. <ul style="list-style-type: none"> • Is open to professional discourse. |
| | All credits to be acquired in the dissertation sub-group | | | |

Specific principles concerning the credit calculation of publications:

1. The goal of publication activity is the continuous presentation of the PhD student's outcomes before the national and international professional community, and the furthering of the research area's coupling with a given student.
2. Joint publication includes the learning of its professional-ethical norms through own experiences.
3. Publication activity serves the acquisition of the skills necessary for the dissertation's independent preparation.
4. The quality and credit value of the publication characteristics require special discussion. Credit values are to be and can be interpreted in one interval.
5. Publication credits of the "Other" category meet the special publication expectations of the given scientific field.

| | 4. Belonging to the publication credit group | Max. credits | | | | Remarks |
|---|--|--------------|--------|-----------------------|--------|---|
| | | In Hungarian | Abroad | In a foreign language | Abroad | |
| A | Book, monography | 8 | 10 | 13 | 15 | Peer-reviewed publication; must be preceded by at least two scientific articles in the given research subject. |
| B | Systematic Literature Review | 8 | 10 | 10 | 13 | Description, e.g. http://www.editage.com/insights/a-young-researchers-guide-to-a-systematic-review (Was available: 11.12.2016.) |
| C | Chapter of a book, in a volume of essays, including volumes on conferences | 5 | 6 | 7 | 10 | Peer-reviewed |
| D | Scientific article | 6 | 7 | 8 | 15 | Peer review, periodical with an independent editorial committee. Publication in a Q1 periodical, type "A" on the list of periodicals of the Hungarian Academy of Sciences' Pedagogical Scientific Committee: max. 15 credits, Publication in a Q2 periodical, type "B" on the list of periodicals of the Hungarian Academy of Sciences' Pedagogical Scientific Committee: max. 15 credits, Publication in a Q2 periodical: max. 8 credits, other: max. 6 credits It is not required for the article to be published abroad. |
| E | Review | 2 | 2 | 3 | 3 | Peer review, periodical with an independent editorial committee. |
| F | Conference lecture | 2 | 3 | 3 | 4 | Abstract of a lecture/poster accepted by a conference, which has an independent scientific committee, and which has been announced in the national and the international sphere. |

| | | | | | | |
|--------------------------------|-------|---|---|---|---|-------------------------|
| G | Other | 2 | 3 | 3 | 4 | Variations by programs. |
| Total number of credits needed | | | | | | 20 |

Publication is one of the most important indicators of the scientific professional career; we could not link the credits to learning outcomes. They can be linked however to the norms and expectations of the professional community, which the student wants to be a member of, and which professional community supports the student in this process by their doctoral program and consultant. Consequently, it is recommended to take into account the following aspects:

| Aspects concerning the calculation of publication credits | |
|---|---|
| 1. | One publication must appear in one of the foreign language periodicals set out on the list of periodicals approved by the Hungarian Academy of Sciences' II. Department's Pedagogical Scientific Committee. http://mta.hu/data/dokumentumok/doktori_tanacs/II.%20Oszty/Doktori_Folyoiratlista_PETB_II_oszty_201605.pdf (Was available: 11.12.2016.) |
| 2. | The participation in at least one international conference is required, which can be certified by an abstract. The quality of the conference is determined by the CDS. |
| 3. | Distribution of the credits concerning publications written in co-authorship: first author: 0,5 credit, irrespectively of the number of authors. The remaining credits are split between the other authors. |
| 4. | The required number of credits can also be acquired through fractional credits; cf. point 6. and 7. |
| 5. | At least two publications must be co-publications with the supervisor. |
| 6. | Two-third of the publications must have an own topic. |
| 7. | First authorship is required concerning at least two publications. |

Specific principles concerning the credit calculation of the education credit group:

1. The goal of the teachers' tasks is learning the support of learning and knowledge sharing.
2. Tasks related to the education credit group and accomplished in a foreign language or at a foreign university can be remunerated with 3 credits.

| Education credit group | Max. credits | Remarks | Learning outcomes (competency in general, which the PhD student acquires after a specific activity) |
|------------------------|--------------|---------|---|
|------------------------|--------------|---------|---|

5. Education block

| | | | | |
|---|--|---|---|--|
| A | Observation at a tutorial | 2 | Half of the credits must be accomplished in the frame of one subject or related to one teacher. Making an observation diary. | <ul style="list-style-type: none"> • Is familiar with the course of a subject or a class from the planning through the realization to its evaluation. • Is able to carry out an observation as well as to assemble aspects related to it. • Is open towards teaching in the field of higher education. |
| B | Assistance provided to a teacher concerning an exam | 3 | Supervision of exams, composition of exam materials, correction of test papers. | <ul style="list-style-type: none"> • Is acquainted with the operation of higher education, with the types of the curriculum and educational units as well as with the relationship between different subjects. • Is capable of supporting teachers and programmes under guidance. • Is interested in getting acquainted with the viewpoints and activities of teachers and students in the field of higher education. |
| C | Smaller assistance provided to a teacher with holding a course | 3 | Creating tools, maintenance of the online platform. | <ul style="list-style-type: none"> • Knows the educational program, more specifically the content of the given subject, the competencies to be developed and the outcome requirements. • Is able to support teachers and programmes under guidance. • Is interested in the online possibilities of learning support in the field of higher education. |
| D | Bigger tasks related to the course provided for the teacher | 4 | Completion of an activity component connected to a lesson or at a lesson. | <ul style="list-style-type: none"> • Is familiar with the course of a subject or a class from the planning through the realization to its evaluation. • Is capable of teaching each subject and of leading the students' learning process in the classroom. • Is open towards teaching in the field of higher education. |
| E | Tasks related to thesis supervision | 5 | Supervision of the thesis' preparation. | <ul style="list-style-type: none"> • Is familiar with the outcome requirements of the given programme and with the expectations concerning the thesis. |

| | | | | |
|---|--------------------------------|---|---|---|
| | | | | <ul style="list-style-type: none"> • Is able to provide continuous support regarding a concrete topic ranging from the planning of a thesis to its handing in and defense. • Understands the importance of the professional support of others and the limitation of his/her own responsibility. |
| F | Holding a course independently | 4 | Preparation of a syllabus, of lesson plan samples, holding lessons, reflective lesson- and course analysis. | <ul style="list-style-type: none"> • Knows the knowledge contents to be transmitted in the course of a subject. • Is able to support programmes independently (under guidance). • Is reflective and open to evaluate their own work. |

6. Block concerning the operation and development of the programme

| | | | | |
|---|--|---|--|--|
| A | Participation in the development of the curriculum and content | 2 | Makes curricula for the operation of the higher education programme. | <ul style="list-style-type: none"> • Is aware of the characteristics of a higher education unit's functioning. • Is able to assign content to a given educational unit or a course. • Is open towards teaching in the field of higher education. |
| B | Participation in the development of subjects and exams | 2 | Elaboration and modification of the components of an educational programme and of its subject descriptions. | <ul style="list-style-type: none"> • Knows the educational programme and the curriculum at least in the depth of one subject. • Is able to formulate learning outcomes and curricula regarding a subject. • Accepts the importance of pedagogy in higher education. |
| C | Participation in the development of educational programmes | 4 | Elaboration and modification of the educational programme's bigger units and its several, interconnected components. | <ul style="list-style-type: none"> • Is familiar with the components of the educational programme, with the structural connections of the subject network as well as with the process of a course from the planning through the realization to its evaluation. • Is able to formulate learning outcomes in the context of several subjects. • Is committed to the high-standard operation of higher education. |
| D | Preparation of teaching material and study-aid | 4 | Elaboration of study-aid and teaching material related to the educational programme. | <ul style="list-style-type: none"> • Is acquainted with the expectations of the educational programme, with the literature of the field, for which the study-aid is prepared, just as with the pedagogical aspects, which are necessary for such a job. • Is able to accommodate the content to the training level as well as to take into account the learnability besides the expectations of scholarship. • Is committed to the high-standard operation of higher education. |

| | | | | |
|---|-----------------------------------|----|---|--|
| D | Educational programme development | 20 | Elaboration of the educational programme's concept and compilation of the programme | <ul style="list-style-type: none"> • Is familiar with the components of the educational programme, with the structural connections of the subject network as well as with the process of a course from the planning through the realization to its evaluation, and arranges these into a conceptual system. • Is capable of harmonizing learning outcomes, in comparison with the training and outcome requirements. • Represents the necessity of higher education pedagogy's high-standard operation. |
|---|-----------------------------------|----|---|--|

Other blocks supporting professional development

| | | | | |
|--|---------------------------------|--|--|--|
| | No proposals have been received | | | |
|--|---------------------------------|--|--|--|

| | | | | |
|--|--------------------------------|----|--|--|
| | Total number of credits needed | 44 | | |
|--|--------------------------------|----|--|--|