# 6.60.05 Regulations for the operation of the cooperative doctoral college Digital Transformation towards a Sustainable Society of TU Clausthal

# Ostfalia University of Applied Sciences dated December 5, 2023 and April 11, 2024

and

Resolution of the Senate of TU Clausthal of 05.12.2023 and the Senate of Ostfalia of 11.04.2024

#### Introduction

A cooperation agreement between TU Clausthal and Ostfalia University of Applied Sciences has been established, outlining joint efforts in research and teaching. This cooperation is the basis for the successful application for "Digitalization Professorships" and includes the consecutive study program DIGITAL TECHNOLOGIES as well as an organizational cooperation in the research center "Center for Digital Technologies". For research in the field of "Digital Technologies", the establishment of a cooperative doctoral college is planned as an integral part of the "Digitalization Professorships" project.

The doctoral college is intended to:

- offer professors involved in DIGIT the opportunity to supervise interdisciplinary doctorates,
- 2. offer Ostfalia academic staff involved in interdisciplinary digitalization projects that are anchored at DIGIT the opportunity to pursue a doctorate,
- 3. promote the interdisciplinary research of graduate school participants through specific events in the curriculum, as per Annex 2,
- 4. optimize the supervision of interdisciplinary dissertations through long-term interdisciplinary cooperation between professors within the framework of the doctoral college, and
- 5. offer a framework for joint research proposals.

 $^1\, \text{The German term } "\textit{Digitalisierungsprofessuren"} \text{ refers to federally funded professorships in digitalization.}$ 

### § 1 Definition and objective

The doctoral college is established as a cooperative institution of Clausthal University of Technology and Ostfalia University of Applied Sciences for all interested scientists. It performs cross-disciplinary and interdisciplinary tasks in research and teaching, in particular for the promotion of young scientists

The aim is to lead graduate school participants to a doctorate within 4 years and to provide them with interdisciplinary training as junior researchers.

The common subject-related goal of the doctoral college is:

- o the development of innovative digital solutions for a sustainable society;
- promoting the digital transformation towards a sustainable society by combining digitalization technologies with application areas;
- the promotion of a transdisciplinary view of the impact on the environment and society.

The scientific objectives and specific design of the doctoral college as well as the participation of non-university research institutions are determined and updated by the coordination team of the doctoral college - if necessary, after consultation in the meeting of the research project leaders of the doctoral college.

# § 2 Organization

# (1) The bodies of the doctoral college are

- o the coordination team
- Spokesperson
- the group of research project leaders
- the group of graduate school participants

#### § 3 The coordination team

The leadership of the doctoral college is entrusted to the coordination team. This team consists of at least three representatives of the university lecturers, including the spokesperson and one representative of the graduate school participants.

The term of office of the representatives of the university lecturers on the Executive Board is 4 years. Re-election is possible.

The coordination team has the following tasks in particular:

- Election of the spokesperson and deputy spokesperson,
- Updating and revision of the curriculum (according to Annex 2),
- Coordination of the research and study program,
- Supporting the spokesperson in the preparation of proposals and reports,
- Processing applications for admission, withdrawal and extension of research project leaders, researchers and graduate school participants from the doctoral college,
- Evaluation of the doctoral college,

- o Invitation of guest researchers,
- Updating and revision of the criteria for proof of active scientific engagement, see
   Annex 1: Proof of active scientific engagement.

The coordination team decides by simple majority.

# § 4 Spokesperson

The spokesperson and deputy spokesperson are elected by a simple majority of the research project leaders in the coordination team.

The term of office of the spokesperson corresponds to the respective term of office of the coordination team of the doctoral college. Re-election is possible.

The spokesperson manages the day-to-day business of the doctoral college and represents the doctoral college externally.

#### § 5 Group of research project leaders

The group of research project leaders includes all professors who are part of the core team of the doctoral college, as well as other individuals who are potentially eligible to supervise doctorates in accordance with the doctoral degree regulations<sup>2</sup> of TU Clausthal.

The group of research project leaders has the following tasks in particular:

- Election of the coordination team (with the exception of the representative of the graduate school participants),
- o Directional decisions for the research and study program (according to Annex 2),
- If necessary, development of selection criteria for the admission of graduate school participants,
- Decisions on financial resources, if applicable.

The prerequisite for membership as a research project leader is active scientific engagement in a research area in the last three to five years, which is verified in accordance with Annex 1. No proof is required for professors at universities in Lower Saxony.

To be accepted as a research project leader in the doctoral college, an application for membership must be submitted to the coordination team. The status of research project leader is valid for a period of five years and will be reviewed after five years at the latest.

For the first application, the research project leader must nominate at least one doctoral student within 2 years. This doctoral student must be supervised by the research project leader in accordance with the doctoral degree regulations. Immediately after being accepted as a doctoral student at TU Clausthal, the student must apply to join the doctoral college as a graduate school participant.

During membership, at least one doctoral dissertation must be contributed and supervised within a period of five years in the doctoral college, in accordance with the doctoral degree regulations of TU Clausthal, from one of the college's research areas.

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<sup>&</sup>lt;sup>2</sup> German: "Promotionsordnung"

If the requirements for membership and the number of supervised doctorates for a research project leader are no longer met, the coordination team will make a decision on exclusion from the doctoral college after hearing from the person concerned.

#### § 6 Group of graduate school participants

The group of graduate school participants includes all doctoral students of TU Clausthal who are completing their doctorate within the framework of the doctoral college. The doctoral degree regulations of TU Clausthal generally apply to graduate school participants.

The requirements for admission as a graduate school participant are based on the regulations of the doctoral degree regulations of the Faculty of Natural and Materials Sciences, the Faculty of Energy and Economic Sciences, and the Faculty of Mathematics/Computer Science and Mechanical Engineering at TU Clausthal regarding the admission to the doctoral college and acceptance as a doctoral student. For each doctoral project, at least one supervisor must be a research project leader of the doctoral college. Doctoral projects must align with the subject-specific goal of the doctoral college (§ 1 Definition and Objectives).

Further tasks of the graduate school participants:

- Election of the member of the coordination team from the group of graduate school participants;
- Active participation in the supervision (preparing and following up appointments, arranging appointments with the supervisors, etc.);
- Involvement in the active organization of events of the doctoral college (independent planning and preparation of events such as retreats or colloquia, suggestions and organization of own event ideas to the coordination team);
- Planning and organization of the annual lecture series<sup>3</sup>;
- Coordination of ideas and projects in collaboration with the coordination team.

The application for admission as a graduate school participant must be submitted to the coordination team. The status of graduate school participant is valid for a period of four years and can be extended by a maximum of one year per application upon justified request, in particular for reasons for which the graduate school participant is not responsible.

# § 7 Members of the doctoral college

Members of the doctoral college are all participating research project leaders, graduate school participants and other academics.

Other academically active individuals are admitted for 5 years on the recommendation of a research project leader. Upon application, membership can be extended for up to 5 years at a time.

The coordination team convenes a general meeting as required, but at least once a year. It deliberates under the direction of the spokesperson

<sup>&</sup>lt;sup>3</sup> German: "Ringvorlesungen"

- on the design of the research and study program and can make recommendations in this regard;
- on the updating and revision of the evidence of active scientific engagement (see Annex 1: Evidence of active scientific engagement) and must approve it;
- on the invitation of guest researchers.

#### § 8 Program of the (cooperative) doctoral college

# (1) Study program/ qualification concept

The study program or qualification concept consists of the individual research plans of the graduate school participants as well as a description of the curriculum (see Annex 2: Sample curriculum with recommendations) in which the following performance assessments must be completed:

- 1. four compulsory modules with a scope of at least 48 work units (AE<sup>4</sup>).
- 2. three compulsory elective modules with a scope of at least 24 work units (AE). Of these
  - a. a module from the courses offered by the Center for University Didactics at TU Clausthal or the Center for Successful Teaching and Learning at Ostfalia is required and
  - b. two modules can be freely chosen from the courses offered by both universities.

# (2) Support concept

The supervisory relationship at the time of registration as a graduate school participant is governed by the doctoral degree regulations of TU Clausthal.

A supervisory committee shall be formed for the supervision of the graduate school participant in accordance with § 6 of the current doctoral degree regulations of TU Clausthal.

The organization of the supervision of doctoral projects within the framework of the doctoral college is set out in the supervision agreement, in accordance with the TU Clausthal Supervision Agreement form. In addition to this supervision agreement, agreements on regular progress reviews can be recorded:

- At least every 6 months, the graduate school participants hold professional discussions with their supervisors to discuss the progress of their work and to determine the further course of the project.
- In addition, an interdisciplinary meeting is held once a year, during which the interdisciplinary qualities are specifically discussed and, if necessary, further training measures are established.
- For regular progress monitoring, the graduate school participants prepare an updated report on the status of their work and further planned work once a year for the interdisciplinary discussion. In particular, proof of performance, publications and conferences must be listed.

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<sup>&</sup>lt;sup>4</sup> German: "Arbeitseinheiten" (AE)

Additional considerations may include support measures and advice on early career planning and encouraging promising young researchers to remain in the academic system. Young scientists should generally be supported with regard to their own scientific independence and integration into national and international scientific networks, including by promoting the international visibility of results.

# § 9 Evaluation

The doctoral college is regularly evaluated in accordance with the TU Clausthal QM handbook. The evaluation procedure and the evaluation dates are determined by the coordination team.

#### § 10 Closure

The doctoral college is closed by a two-thirds majority of the group of research project leaders at the suggestion of the coordination team.

# § 11 Coming into effect

These regulations shall enter into force following their adoption by the Senate on the day after their publication in the official gazette of Clausthal University of Technology.

### Annex 1 Proof of active scientific engagement

# (1) Reference period and evidence

When submitting the application, the applicant specifies a reference period of three, four or five years.

The proven periods for the publications (see paragraph 2) and the third-party funding acquired (see paragraph 3) must be identical.

The specified period for proof of publications and third-party funding may include the current year.

On application and with appropriate evidence, periods of child-rearing, caring for relatives or illness can be excluded from the reference period when providing evidence of publication achievements and the acquisition of third-party funding.

#### (2) Scientific publications

During the reference period, at least one peer-reviewed publication per year, on average, in recognized bodies must be demonstrated. Depending on the subject culture, other academic achievements, e.g. invited peer-reviewed lectures, monographs or academic editing activities, can be used as an alternative to peer-reviewed publications.

A habilitation can be counted as fulfillment of the publication requirement up to a maximum of five years after graduation.

Granted patents can be counted as equivalent to a maximum of one quarter of the required publications.

# (3) Third-party funds

In the reference period prior to the application, evidence must be provided of competitively acquired, research-related third-party funding in accordance with § 22 NHG amounting to at least EUR 100 thousand per year on average in the life sciences, natural sciences or engineering or EUR 50 thousand per year on average in other subject areas.

Third-party funds are all funds according to the definition of third-party funds of the Federal Statistical Office. In addition, funds from the state of Lower Saxony can also be taken into account as third-party funds for the proof of active scientific activity.

With regard to the third-party funding criterion, it is not the affiliation to a department or an institute that determines the affiliation to a scientific field, but the predominant affiliation of the research actually carried out.

The amount of third-party funding is measured in terms of the sum raised and distributed over the reference period. The self-declaration is confirmed by the university administration of the applicant's home university. In the case of joint projects, the share attributable to the applicant counts.

Third-party funds acquired before the appointment to a professorship can be recognized if they were acquired independently after the doctorate at a university or a university-like institution and a confirmation of this can be presented from the relevant institution.

If the required sum of competitively obtained third-party funds falls short by no more than 10%, this shortfall can be offset by exceptional performance in the publication qualification area that exceeds the minimum level of performance required to be demonstrated in paragraph 2.

Annex 2: Curriculum with recommendations for further training measures

	Entry phase	Research phase						Closing phase
	Semester	Semester	Semester	Semester	Semester	Semester	Semester	Semester
Specialist further training on the cross-section topic	Lecture series	Colloquium	Lecture series	Colloquium	Lecture series	Colloquium	Lecture series	Colloquium
Interdisciplinary training/ certificate programs	P-Module 1: Good scientific practice (DE/ENG)	P-Module 2: CE and sustainability (ENG)	P-Module 3: Scientific writing (DE/ENG)	WP-Module 1: Compulsory elective module*	P-Module 4: Scientific presentation (DE/ENG)	WP-Module 2: Compulsory elective module university didactics**	WP-Module 3: Compulsory elective module*	
Doctoral project	Topic literature research synopsis work plan	Individual academic work/ research/ doctoral project						Completion and submission of the dissertation
Participation in conferences/mee tings etc.			Symposium/ Conference		Symposium/ Conference		Symposium/ Conference	
Internal retreats/ symposia/		Retreat		Retreat		Retreat		Symposium

- \*Graduate school participants can choose from the ProDocTUC, ProDocTUC+ and Ostfalia's continuing education programs in consultation with their supervisor.
- \*\*Graduate school participants should be encouraged to educate themselves in particular in modern methods of didactics, this can also be the participation in offered projects such as "Agile Methods in Digital Courses (AGGIT), Ostfalia: <a href="https://blogs.sonia.de/aggit/">https://blogs.sonia.de/aggit/</a>".
- \*\*\*WP refers to the German "Wahlpflicht" (WP) courses