

Please note:

**The legally binding version of
these regulations can only be
found in our Official Notices.**

A neural machine translation service was used for the translation of these regulations. We do not guarantee the quality and accuracy of the translation.

Doctoral Degree Regulations of the Department of Media and Interactions of the Graduate School for Applied Research in North Rhine-Westphalia

from 10.05.2023

The Department of Media and Interactions has issued the following doctoral degree regulations on the basis of § 67b (3) and § 67 (3) of the North Rhine-Westphalia Higher Education Act (Hochschulgesetz – HG) of September 16, 2014, in the version of the law amending the Higher Education Act of July 12, 2019 (GV. NRW. p. 377) and the framework doctoral degree regulations of the Graduate School for Applied Research in North Rhine-Westphalia of January 31, 2023 (RPO):

Contents

- § 1 Scope of application
- § 2 Conferral of doctoral degrees
- § 3 Purpose and form of the doctorate
- § 4 Doctoral examining committee
- § 5 Admission requirements
- § 6 Acceptance as a doctoral candidate
- § 7 Supervision
- § 8 Opening of the doctoral procedure
- § 9 Reviewers
- § 10 Examination board
- § 11 Dissertation
- § 12 Disputation
- § 13 Overall grade of the doctorate
- § 14 Completion of the doctorate and certificate
- § 15 Publication of the dissertation
- § 16 Withdrawal from the defense
- § 17 Deception and revocation of the doctorate
- § 18 Inspection
- § 19 Appeal against decisions in the doctoral procedure
- § 20 Protection periods
- § 21 Compensation for disadvantages
- § 22 Retention of examination documents
- § 23 Doctorate in joint supervision with universities entitled to award doctorates and joint awarding of degrees
- § 24 Cooperative doctorates with universities not authorized to award doctorates
- § 25 Entry into force

§ 1 Scope of application

(1) These doctoral degree regulations apply to all doctoral studies carried out in the Department of Media and Interactions of the Graduate School for Applied Research in North Rhine-Westphalia. Insofar as no provisions have been made in these doctoral degree regulations, the corresponding rules of the framework doctoral degree regulations of the Graduate school for Applied Research in North Rhine-Westphalia apply.

(2) In the case of interdepartmental doctoral topics in which the Department of Media and Interactions is involved, a department is determined through whose doctoral degree regulations the procedure is handled. The administrative responsibility for an interdepartmental doctoral procedure lies with the department through whose doctoral degree regulations the procedure is handled.

§ 2 Conferral of doctoral degrees

(1) Upon successful completion of the doctoral examination, the department awards the academic degree of Doktor der Ingenieurwissenschaften (Doktor-Ingenieur – Dr.-Ing.), the academic degree of Doktor der Naturwissenschaften (Doctor rerum naturalium – Dr. rer. nat.) or the academic degree of Doktor der Philosophie (Doctor philosophiae – Dr. phil.) in the doctoral program Human, Digitality, Society and the academic degree of Doktor der Philosophie (Doctor philosophiae – Dr. phil.) in the doctoral program Media, Education, Aesthetics, Design.

(2) The academic degree of Doktor der Ingenieurwissenschaften (Doktor-Ingenieur – Dr.-Ing.) is awarded if the dissertation is predominantly of an engineering nature; the academic degree of Doktor der Naturwissenschaften (Doctor rerum naturalium – Dr. rer. nat.) is awarded if the dissertation is predominantly of a natural science nature; the academic degree of Doktor der Philosophie (Doctor philosophiae – Dr. phil.) is awarded if the dissertation is predominantly of a humanities, social science or cultural science nature. The decision is made by the responsible doctoral examining committee.

(3) The academic degree of Doktor der Ingenieurwissenschaften (Doktor-Ingenieur – Dr.-Ing.) can also be awarded with the following titles: Doktorin der Ingenieurwissenschaften (Doktor-Ingenieurin – Dr.-Ing.) or Doktor*in der Ingenieurwissenschaften (Doktor-Ingenieur*in – Dr.-Ing.). The academic degree of Doktor der Naturwissenschaften (Doctor rerum naturalium – Dr. rer. nat.) can also be awarded with the following designations: Doktorin der Naturwissenschaften (Doctor rerum naturalium – Dr. rer. nat.) or Doktor*in der Naturwissenschaften (Doctor rerum naturalium – Dr. rer. nat.). The academic degree of Doktor der Philosophie (Doctor philosophiae – Dr. phil.) can also be awarded with the following titles: Doktorin der Philosophie (Doctor philosophiae – Dr. phil.) or Doktor*in der Philosophie (Doctor philosophiae – Dr. phil.).

§ 3 Purpose and form of the doctorate

- (1) The doctorate serves as proof of the ability to carry out in-depth academic work in one of the department's specialist areas. The doctorate is based on independent academic work (dissertation) and an oral examination (disputation).
- (2) The doctorate takes place within the framework of the doctoral programs specified in § 2 (1). The required work must be completed as part of the doctoral programs. These are part of the requirements for admission to the doctoral procedure.
- (3) Doctorates can also be carried out across departments. Doctoral candidates who are doing an interdepartmental doctorate and whose procedure is handled via these doctoral degree regulations may also complete the work to be performed in accordance with (2) in a doctoral program of the participating department.
- (4) The duration of the doctorate should not exceed five years. In justified cases, the doctoral examining committee may extend the period by one year up to three times on application submitted before expiry; the application must be accompanied by a justification and a statement from the supervisors responsible for the subject. Upon expiry of the maximum permitted duration of the doctorate, admission to the doctorate expires, unless the doctoral procedure has already been initiated. Leave of absence and periods of protection in accordance with § 20 are not counted towards the duration of the doctorate.

§ 4 Doctoral examining committee

- (1) The election, composition, responsibilities and working methods of the doctoral examining committee are regulated in § 4 RPO.
- (2) The Doctoral examining committee may ask professorial members, university cooperation partners and associated professors of the doctoral program for written statements in advance and take the statements into account in its decisions after thorough evaluation.
- (3) The doctoral examining committee may delegate individual tasks to the chairperson for execution in accordance with § 4 (1) RPO.
- (4) With regard to the composition of the doctoral examining committee, it is stipulated that the professional expertise for the doctoral degrees awarded in the doctoral programs in accordance with § 2 (1) should be represented in an appropriate form by the professorial members. The committee should be composed in a gender-equitable manner within the meaning of § 2 of the election regulations for the election to the bodies and committees of the Graduate School NRW of 16.04.2021.

§ 5 Admission requirements

(1) Access to the doctoral procedure is granted to those holding

- a) a degree following a relevant university course of study with a general standard period of study of at least eight semesters, for which a degree other than “Bachelor” is awarded, or
- b) a degree after a relevant university degree with a general standard period of study of at least six semesters and subsequent appropriate studies in the doctoral subjects in preparation for the doctorate or
- c) a degree from a Master's degree program within the meaning of HG § 61 (2) sentence 2

which was graded at least “good” and obtained in a subject relevant to the doctorate.

(2) Major subjects within the meaning of (1) are degree programs with predominantly engineering content, if the academic degree Dr.-Ing. is sought, degree programs with predominantly mathematical and scientific content, if the academic degree Dr. rer. nat. is sought, and degree programs with predominantly humanities, social sciences or cultural studies content, if the academic degree Dr. phil. is sought. In the case of interdisciplinary degree programs, the doctoral examining committee decides.

(3) If the qualified degree in accordance with paragraph 1 a) to c) was awarded a grade lower than "good", the doctoral examining committee may exceptionally admit the applicant to the doctorate, provided that two expert opinions from professors with a proven track record in the subject recommend the applicant.

(4) If admission to the doctoral procedure is granted in accordance with § 5 (1) b), the Doctoral examining committee shall determine the modules and examinations to be completed as part of the preparatory studies for the doctorate, taking into account the completed degree and the envisaged dissertation topic. The required scope of work may not exceed the number of ECTS credits required for a consecutive Master's degree. The modules and examinations are taken from the relevant Master's degree programs of the sponsoring universities. The pre-doctoral studies have been passed if all modules and examinations to be taken have been completed with an average grade of at least “good”. The requirements must be fulfilled by the start of the doctoral procedure, unless another deadline is specified.

§ 6 Acceptance as a doctoral candidate

(1) Acceptance as a doctoral candidate is regulated in § 6 RPO.

(2) Acceptance is initially limited to five years and can be extended three times by one year upon application, provided that the supervisors of the thesis confirm that the doctoral project can be successfully completed within this period.

§ 7 Supervision

(1) Supervision is regulated in § 7 RPO.

(2) The supervision of a dissertation is a permanent duty of the supervisors and may not be delegated.

(3) Further rights and obligations of the supervision team are set out in the supervision agreement in accordance with § 7 (7) RPO.

(4) The supervision agreement only becomes effective upon acceptance as a doctoral candidate.

(5) In the case of interdepartmental doctoral projects that are processed via these doctoral degree regulations, the supervisors should be appointed in such a way that the departments involved are represented.

(6) In the case of interdisciplinary doctoral projects, the supervisors should be appointed in such a way that the disciplines involved are represented.

§ 8 Opening of the doctoral procedure

The opening of the doctoral procedure is regulated in § 8 RPO.

§ 9 Reviewers

(1) The appointment and exclusion of reviewers is regulated in § 9 RPO.

(2) In the case of interdepartmental doctoral projects that are processed via these doctoral degree regulations, the reviewers should be appointed in such a way that the departments involved are represented.

(3) In the case of interdisciplinary doctoral projects, the reviewers should be appointed in such a way that the disciplines involved are represented.

§ 10 Examination board

(1) The composition and working methods of the examination board are regulated in § 10 RPO.

(2) In the case of interdepartmental doctoral projects that are processed via these doctoral degree regulations, the members of the examination committee should be appointed in such a way that the departments involved are represented.

(3) In the case of interdisciplinary doctoral projects, the members of the examination committee should be appointed in such a way that the disciplines involved are represented.

§ 11 Dissertation

(1) Writing and assessment of the dissertation are regulated in § 11 RPO.

(2) As a rule, the dissertation must be written in German or English.

(3) The written, reasoned assessments in accordance with § 11 (7) RPO can be submitted in electronic form.

(4) In the case of a cumulative dissertation, at least three publications must have been published or accepted for publication, of which at least two must have been published or accepted for publication in a peer-reviewed, internationally recognized publication organ and of which the doctoral candidate must be listed as the first author of at least one article. A shared first authorship with another person can be assessed as a sole first authorship if both authors have contributed equally to the publication and their own contribution could also stand alone in terms of quality and scope. Otherwise, shared first authorship with up to two other persons can be counted proportionately. None of the submitted work may be the subject of another dissertation of an ongoing or completed doctoral procedure of the doctoral candidate. In cases of doubt, the doctoral examining committee decides in accordance with the subject culture whether all of the aforementioned requirements for a cumulative dissertation are met.

(5) If the assessment period includes the month of August, the deadline for submitting the reports may be extended by four weeks in accordance with § 11 (7) RPO.

(6) The deadline for submitting the dissertation and the reviews to the department in accordance with § 11 (9) RPO may be shortened at the request of the doctoral candidate if there are serious reasons for doing so. The decision is made by the doctoral examining committee.

(7) The reviewer must provide the doctoral examining committee with written reasons for exceeding the deadline for submission of the review.

(8) The doctoral candidate will be notified of the reviews before they are displayed, with the opportunity to comment.

§ 12 Disputation

The conduct and assessment of the disputation are regulated in § 12 RPO.

§ 13 Overall grade of the doctorate

The determination of the overall grade of the doctorate is regulated in § 13 RPO.

§ 14 Completion of the doctorate and certificate

The completion of the doctorate is regulated in § 14 RPO.

§ 15 Publication of the dissertation

The publication of the dissertation is regulated in § 15 RPO.

§ 16 Withdrawal from the defense

Withdrawal from the defense is regulated in § 16 RPO.

§ 17 Deception and revocation of the doctorate

The procedure in the event of cheating and withdrawal of the doctorate is regulated in § 17 RPO.

§ 18 Inspection

Inspection is regulated in § 18 RPO.

§ 19 Appeal against decisions in the doctoral procedure

Appeals against decisions in the doctoral procedure are regulated in § 19 RPO.

§ 20 Protection periods

The protection periods are regulated in § 20 RPO.

§ 21 Compensation for disadvantages

(1) Compensation for disadvantages is regulated in § 21 RPO.

(2) If the reason for applying for compensation for disadvantages only arises or is determined after the examination procedure has been opened, the compensation for disadvantages must be applied for immediately after the determination and proven in accordance with § 21 (2) RPO.

§ 22 Retention of examination documents

The storage of examination documents is regulated in § 22 RPO.

§ 23 Doctorate in joint supervision with universities entitled to award doctorates and joint awarding of degrees

Doctorates under joint supervision with universities entitled to award doctorates and joint awarding of degrees are regulated in § 23 RPO.

§ 24 Cooperative doctorates with universities not authorized to award doctorates

Cooperative doctorates with universities that are not authorized to award doctorates are regulated in § 24 RPO.

§ 25 Entry into force

The regulations enter into force on the day following their publication in the Official Notices of the Graduate school for Applied Research in NRW.

Issued on the basis of the resolution of the Department council dated 10.05.2023.

Bottrop, 11.05.2023

The Chairman of the Department council

signed *Geisler*

(Prof. Dr. Stefan Geisler)

Attachments

- 1) Doctoral program Media, Education, Aesthetics, Design
- 2) Doctoral program Human, Digitality, Society

Annex 1: Doctoral program Media, Education, Aesthetics, Design of the Department of Media and Interactions

The doctoral program *Media, Education, Aesthetics, Design* of the Department of *Media and Interactions* focuses in particular on the creative and receptive use of media formats and reflects the main research areas of *Media and the Public Sphere, Media Culture and Media Education* as well as *Aesthetics and Communication* of the Department of *Media and Interactions*.

The program is primarily aimed at graduates with a degree in the humanities, social sciences or cultural studies or a degree in the field of design and creation, whose doctoral projects deal with media content, productions, effects, recipients, skills, education, economics, systems, aesthetics, history and/or theories and analyse them from an educational, ethnological, communication science, cultural science, literary science, philosophical, psychological, sociological, linguistic, economic or social science perspective.

1 Goals and content

The aim of the structured doctoral program *Media, Education, Aesthetics, Design* of the Department of *Media and Interactions* of the Graduate school for Applied Research in North Rhine-Westphalia is to produce excellently qualified individuals who have professional and methodological expertise in the field of media research in the broader sense, scientific independence and the ability to place their own dissertation project in a broader professional context and design and carry out their own research projects in this field, have very good skills in the area of knowledge dissemination, transfer and knowledge transfer, have (inter)national scientific contacts and networks, have the ability to be aware of their ethical responsibility as researchers, have future skills in the face of digital transformation processes and have excellent interdisciplinary skills, e.g. in the area of project management or collaboration in research groups. They must have excellent interdisciplinary skills, e.g. in project management or collaboration in intercultural teams, and be well prepared for the digitalized world of work and an academic career or a specialist or management position outside academia in the media industry or in the education and culture sector.

The Doctoral candidates acquire their professional and methodological expertise through the scientific examination of the increasing convergence of analogue and digital media, of the production and reception of media formats and of the increasing differentiation of traditional mass media with the simultaneous content-related, organizational and technical merging of individual media into larger complexes and perceptual dispositives. At the production level, the focus is on socio-cultural, socio-economic, media content, media didactics, aesthetics and design issues; at the reception level, questions of media appropriation, media gestures, media effects as well as media analyses and theorizing. They also conduct research into the political design of media systems, public opinion formation, the media industry, media literacy, media education and media history.

2 Doctoral degrees

Due to the thematic orientation of the program and the focus on issues in the humanities, social sciences, cultural studies and design, the Dr. phil. degree is awarded.

3 Structure/content of the program

As a rule, the doctoral program is designed for three years. The courses can be selected from the courses offered by the PK NRW or recognized by the responsible doctoral examining committee. The program is based on the framework doctoral program of the PK NRW and provides for a compulsory and a compulsory elective area.

3.1 Mandatory area

The courses in the compulsory area are offered in German or English and regularly during the semester, as block courses or as online courses.

Where possible, compulsory courses should be designed to be agile and project-oriented. This includes cooperation between Doctoral candidates and supervisors that is characterized by appreciation and transparency, flexibility, rapid feedback at short intervals and, at the same time, personal responsibility and self-organization by the Doctoral candidates. Collaborative work, media and digital skills and agile cooperation processes are at the forefront. This is to be achieved in particular through the hybridization of analogue and digital forms of cooperation.

The events have the following objectives and content:

a) Workshop "Good scientific practice"

In this workshop, the doctoral candidates work on the guidelines for good scientific practice based on the guidelines of the PK NRW and the DFG Code and are encouraged to reflect on their own scientific work.¹ It is regularly offered centrally by the Graduate School NRW. The workshop must be successfully completed once; attendance in the first year is recommended.

b) Workshop "Ethics and responsibility in society"

In this workshop, Doctoral candidates are taught the normative and ethical standards for scientific research and are given access to the philosophical foundations of ethical discourse related to research. It is regularly offered centrally by the Graduate School NRW. The workshop must be successfully completed once; attendance in the first year is recommended.

¹ See <https://wissenschaftliche-integritaet.de/ueber-den-kodex/>.

c) Lecture series / doctoral seminar

The lecture series or doctoral seminar offers an insight into current research findings by professors in the department and/or invited (inter)national guests who *are* researching topics related to the main research areas of *media and the public sphere, media culture and media education* or *aesthetics and communication*. The individual lectures or sessions can also be given by more advanced Doctoral candidates. The following perspectives are addressed as examples:

- Digital transformation processes
- Digitality as an interplay between digital and analog actors and networks
- Future scenarios and stocktaking
- Diagnoses and solutions.

By attending the lecture series or the doctoral seminar, doctoral candidates are able to recognize connections between the main research areas and the topics and research questions dealt with in the program and to place them in an interdisciplinary context as well as to identify and discuss the associated social challenges and to work on proposals for solutions. The lecture or doctoral seminar is offered at least once a year by the department, comprises five to seven dates or is offered as a block with a total of ten to fourteen teaching hours and must be successfully completed once; attendance in the first year is recommended.

d) Course on research methods

In addition to the framework doctoral program of the PK NRW, a course on research methods is a mandatory component of the doctoral program *Media, Education, Aesthetics, Design* of the Department of *Media and Interactions*. A distinction is essentially made between two types of course:

- Overview of methods: In this overview course, Doctoral candidates are given the basics of selected qualitative and/or quantitative methods. Methods are taught that are frequently applied in the research areas of *media and the public sphere, media culture and media education* or *aesthetics and communication*.
- Application-oriented in-depth study of methods: In the in-depth courses on research methods, an individual method is discussed and concretized by means of application examples.

Methods from the following areas are covered, for example: Theory of science, history of science, close readings, artistic-creative research methods, media analysis, ethnographic observation, methods of (qualitative and quantitative) empirical social research, discourse analysis, semiotics, intermedial analysis, empirical aesthetics, narratology, software studies, a.s.o.

Courses on research methods are regularly offered by the department; the doctoral examining committee will decide on crediting after consultation with the doctoral candidate's supervisory team. One course on research methods (overview or in-depth study of methods) must be successfully completed; attendance in the first year is recommended. Further courses on research methods can be recognized as part of the compulsory elective area.

e) Doctoral student colloquium

The colloquium serves to present, discuss and further develop current doctoral projects. It provides Doctoral candidates with the skills to present and justify the technical and methodological foundations, interdisciplinary connections and extracurricular references of their doctoral project and to assess their significance for practice. It also offers Doctoral candidates the opportunity to discuss current problems and obtain peer feedback and feedback from the participating professors. The colloquium is offered once per semester by the department. It must be successfully completed twice with a presentation; attendance in the first and second year is recommended.

f) Presentation of your own research at an external scientific conference

The presentation of one's own research at an external scientific conference serves to discuss the doctoral project and to introduce the doctoral candidate to the national or international scientific community. The selection of the conference and the time of the presentation is made in consultation with the supervisory team. In the compulsory part of the doctoral program, students must present their own research once at an external scientific conference. Presentations at other conferences can be recognized as an achievement as part of the compulsory elective area.

g) Progress report and progress meeting; updating the time and work plan of the supervision agreement

In progress reports and progress meetings, doctoral candidates report to their supervisory team on the current status of their doctoral project, the results of their research to date and the next steps in their work; on this basis, the next steps in their work are discussed, the work plan and timetable of the supervision agreement are updated and the opportunities for stays abroad, the presentation of the doctoral topic in workshops, at national and international conferences and meetings and participation in other events for further professional and interdisciplinary qualification are discussed. Progress reports must be submitted annually, progress meetings are scheduled at least once a semester; they supplement the regular supervision meetings, but do not replace them.

3.2 Compulsory elective area

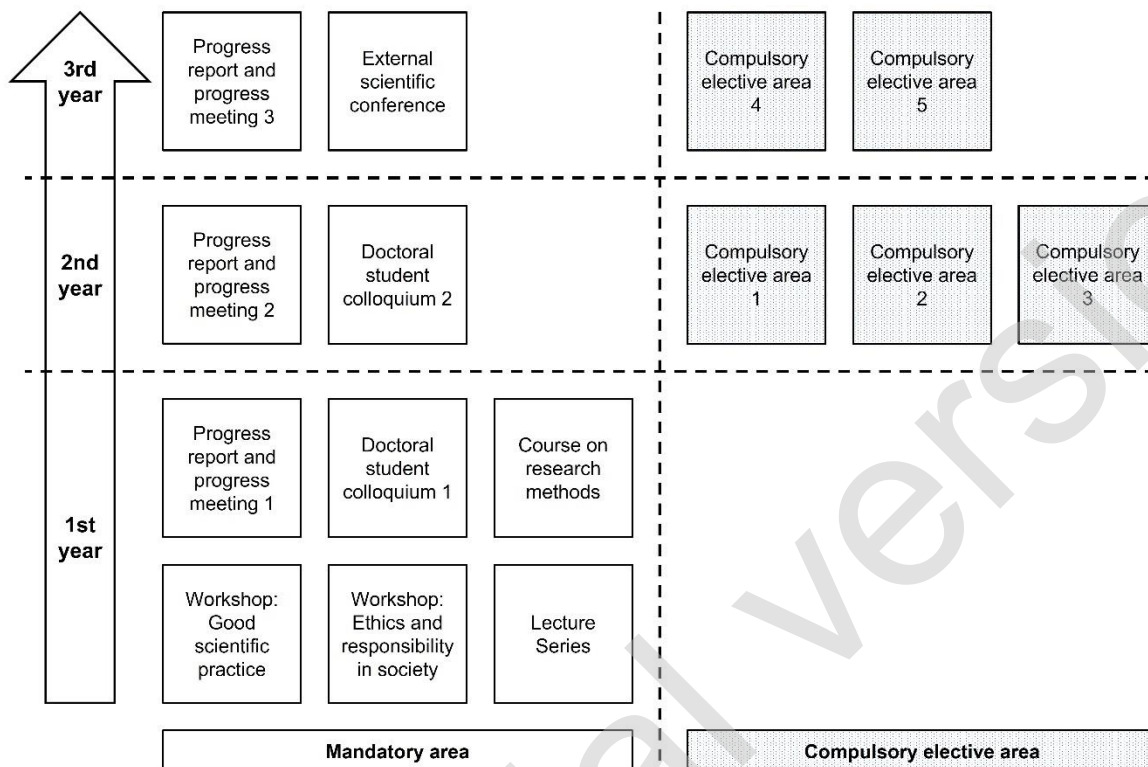
Doctoral candidates can develop their profile according to their own personal interests and needs in the compulsory elective area, which consists of four specializations. During the course of the doctorate, a total of five creditable achievements from three specializations must be completed. The doctoral examining committee decides on crediting after consultation with the doctoral candidate's supervisory team.

Overview of the focus areas and creditable achievements in the compulsory elective area

Focus I: Conferences
<i>The focus conferences serves the presentation and discussion own research results as well as discussion of external research results in the scientific community.</i>
Participation in national or international conference (without own contribution)
Participation in national or international conference with own contribution (poster, lecture or competitive demonstration)
Focus II: Publications
<i>The focus on publications serves the publication of own research results in the scientific community.</i>
Article in a journal
Publication in other organs (e.g. conference proceedings)
Publication of a review
Editorship of a conference volume or similar.
Focus III: Workshops/events
<i>The focus on workshops/events serves to further qualify Doctoral candidates.</i>
Interdisciplinary qualification workshop
In-depth specialist event on the topics of <i>media and the public</i> , <i>Media culture and media education</i> or <i>aesthetics and communication</i>
Event on research methods
University didactic workshop
Further training (usually at least 1 day)
Summer schools, winter schools or comparable events
Language course
Lecture series of other departments
Focus IV: Science communication and other transfer services
<i>The focus on science communication and other transfer services serves to develop skills in the field of science communication and transfer</i>
Information event, conference or workshop for companies, the public sector or organizations
Application for a relevant patent
Founding a relevant start-up
Integration into academic teaching
Research stay with a connection to a research institution or university (at least 2 weeks) and submission of a results report, also internationally
Internship in an area that is relevant to your future career (at least 2 weeks)
Organization of a scientific or transfer conference/event
Activities in academic self-administration and committee work (e.g. spokesperson of doctoral candidates or membership in appointment committee)
Organization of an exhibition

Sample schedule for the services to be provided

Exemplary course of studies for the doctoral program ,Media, Education, Aesthetics, Design'



Annex 2: Doctoral program Human, Digitality, Society of the Department of Media and Interactions

The *Human, Digitality, Society* doctoral programme in the *Media and Interactions* department focuses in particular on the human-centric development of technology in an increasingly digitalized society. The effects of digital transformations on people and society are also researched. The doctoral program reflects the research focus areas *Digital Society* and *Human-Machine Interaction* of the Department of Media and Interactions.

The program is aimed at Doctoral candidates with a computer science-related degree (natural sciences or engineering), a degree in psychology or design with a focus on the conception, development and/or evaluation of technical systems from a human-centered perspective and a degree in social sciences, economics, administration or the humanities with a focus on the investigation of the requirements of technical systems or the impact of digital systems or processes on people and society.

1 Goals and content

The aim of the structured doctoral program *Human, Digitality, Society* of the Department of *Media and Interactions* of the Graduate School for Applied Research in North Rhine-Westphalia is to produce excellently qualified individuals who have professional and methodological expertise, have demonstrated the ability to conduct independent scientific research and have broad interdisciplinary skills that qualify them for prominent positions in business and science. With a successful dissertation, graduates have not only demonstrated the ability to carry out independent, in-depth academic work on their own project, but by completing the doctoral program they have also demonstrated the ability to place their own dissertation project in a wider subject-specific and, in particular, interdisciplinary context and to design and carry out their own research projects in this field. Creativity and innovative spirit are trained, problem-solving skills and the ability to think critically are developed. Knowledge of good scientific practice and an awareness of the ethical responsibility of researchers were taught and applied in their own work and in professional discourse with other Doctoral candidates.

As part of the program, Doctoral candidates have successfully presented their research work at national and international scientific conferences, established scientific contacts, built networks and published their results in peer-reviewed journals. Furthermore, they have successfully transferred knowledge, for example to practitioners and/or students in the context of courses. The compulsory elective area allows the development of various future skills (21st century skills) in the face of digital transformation processes and thus also prepares the Doctoral candidates for a career after their doctorate.

The Doctoral candidates gain their technical and methodological expertise through the scientific examination of the increasing digital transformation at the interface between humans or society and technical systems. On the one hand, the individual components at the interface are examined. For example, the focus is on the design of technical systems that are

appropriate for people and society in terms of usability and user experience as well as functionality, data protection and data security. In addition, human resources for the use of technical systems and the digital interaction of people in groups are examined in the tradition of the research fields of Science and Technology Studies (STS), Computer Supported Cooperative Work (CSCW) and Computer Supported Collaborative Learning (CSCL). On the other hand, this doctoral program also deals with the interactions in terms of socio-technical systems and acceptance, both in a private, economic and state context.

2 Doctoral degrees

As part of this doctoral program, the degrees Dr.-Ing., Dr. rer. nat. or Dr. phil. can be obtained. The content and methods used in the submitted work are decisive. The decision is made by the doctoral examining committee in consultation with the doctoral candidate and the team supervising the thesis.

3 Structure/content of the program

The doctoral program is generally designed for three years. The courses can be chosen from the courses offered by the PK NRW or recognized by the responsible doctoral examining committee. The program is based on the framework doctoral program of the PK NRW and provides for a compulsory and a compulsory elective area.

3.1 Mandatory area

The courses in the compulsory area are offered in German or English and regularly during the semester, as block courses or as online courses.

Where possible, compulsory courses should be designed to be agile and project-oriented. This includes cooperation between Doctoral candidates and supervisors that is characterized by appreciation and transparency, flexibility, rapid feedback at short intervals and, at the same time, personal responsibility and self-organization by the Doctoral candidates. Collaborative work, media and digital skills and agile cooperation processes are at the forefront. This can be achieved in particular by hybridizing analogue and digital forms of cooperation.

The events have the following objectives and content:

a) Workshop "Good scientific practice"

In this workshop, the doctoral candidates work on the guidelines for good scientific practice based on the guidelines of the PK NRW and the DFG Code and are encouraged to reflect on their own scientific work.² It is regularly offered centrally by the Graduate School NRW. The workshop must be successfully completed once; attendance in the first year is recommended.

² See <https://wissenschaftliche-integritaet.de/ueber-den-kodex/>.

b) Workshop "Ethics and responsibility in society"

In this workshop, Doctoral candidates are taught the normative and ethical standards for scientific research and are given access to the philosophical foundations of ethical discourse related to research. It is regularly offered centrally by the Graduate school NRW. The workshop must be successfully completed once; attendance in the first year is recommended.

c) Lecture series / doctoral seminar

In the lecture series or the doctoral seminar, current research results of the professors of the department and/or invited (inter)national guests who are researching the topics of the research focus areas *Digital Society* or *Human-Machine Interaction* are discussed. The presentations can also be given by more advanced Doctoral candidates. The following topics will be addressed in the individual lectures and sessions as examples:

- Methods of participation in digitization processes with special consideration of diversity factors
- ethical, legal and social implications of digitization processes
- Artificial intelligence and big data in the corporate context
- Human-centered development of intelligent systems
- Human-technology collaboration - selected hardware and software aspects

By attending the lecture series or doctoral seminar, Doctoral candidates are able to recognize connections between the main research areas and the topics and research questions dealt with in the program and to place them in an interdisciplinary context as well as to identify and discuss the associated social challenges and to work on proposals for solutions. The lecture or doctoral seminar is offered at least once a year by the department, comprises five to seven dates or is offered as a block with a total of ten to fourteen lessons are offered and must be successfully completed once; attendance in the first year is recommended.

d) Course on research methods

In addition to the framework doctoral program of the PK NRW, a course on research methods is a mandatory component of the doctoral program *Human, Digitality, Society* of the Department of *Media and Interactions*. A distinction is essentially made between two types of course:

- Overview of methods: In this overview course, Doctoral candidates are taught the basics of selected methods that are frequently used in the research focus areas *Digital Society* and *Human-Machine Interaction*.
- Application-oriented in-depth study of methods: In the in-depth courses on research methods, an individual method is discussed and concretized through application examples.

Methods such as: Scientific theory, methods of empirical social research (interviews, questionnaires, observation, group discussions, etc.), implementation and evaluation,

descriptive and inductive statistics, systematic literature evaluation, design science research, advanced methods for usability evaluation (including eye-tracking), emotion and stress measurement and other physiological measurements, creativity methods, participatory methods, mixed methods and triangulation, presentation of results in written form and presentation.

Courses on research methods are regularly offered by the department; the doctoral examining committee will decide on crediting after consultation with the doctoral candidate's supervisory team. One course on research methods (overview or in-depth study of methods) must be successfully completed; attendance in the first year is recommended. Further courses on research methods can be recognized as part of the compulsory elective area.

e) Doctoral student colloquium

The colloquium serves to present, discuss and further develop current doctoral projects that are being worked on as part of this program. It provides doctoral candidates with the skills to present and justify the technical and methodological foundations, interdisciplinary connections and extracurricular references of their doctoral project and to assess their significance for practice. It also offers doctoral candidates the opportunity to discuss current problems and obtain peer feedback and feedback from the participating professors. The colloquium is offered once per semester by the department. It must be successfully completed twice with a presentation; attendance in the first and second year is recommended.

f) Presentation of one's own research at an external scientific conference

The presentation of one's own research at an external scientific conference serves to discuss the doctoral project and to introduce the doctoral candidate to the national or international scientific community. The selection of the conference and the time of the presentation is made in consultation with the supervisory team. In the compulsory part of the doctoral program, your own research must be presented once at an external scientific conference. Presentations at other conferences can be recognized as an achievement as part of the compulsory elective area.

g) Progress report and progress meeting; updating the time and work plan of the supervision agreement

In progress reports and progress meetings, doctoral candidates report to their supervisory team on the current status of their doctoral project, the results of their research to date and the next steps in their work; on this basis, the next steps in their work are discussed, the work plan and timetable of the supervision agreement are updated and the possibilities for stays abroad, the presentation of the doctoral topic in workshops, at national and international conferences and meetings and participation in other events for further professional and interdisciplinary qualification are discussed. Progress reports must be submitted annually, progress meetings are scheduled at least once a semester; they supplement the regular supervision meetings, but do not replace them.

3.2 Compulsory elective area

Doctoral candidates can develop their profile according to their own personal interests and needs in the compulsory elective area, which consists of four specializations. During the course of the doctorate, a total of five creditable achievements from three specializations must be completed. The doctoral examining committee decides on crediting after consultation with the doctoral candidate's supervisory team.

Overview of the focus areas and creditable achievements in the compulsory elective area

Focus I: Conferences
<i>The focus on conferences serves the presentation and discussion of own research results as well as the discussion of external research results in the scientific community.</i>
Participation in national or international conference (without own contribution)
Participation in national or international conference with own contribution (poster, lecture or competitive demonstration)
Focus II: Publications
<i>The focus on publications serves the publication of own research results in the scientific community.</i>
Article in a journal
Publication in other organs (e.g. conference proceedings)
Publication of a review
Editorship of a conference volume or similar.
Focus III: Workshops/events
<i>The focus on workshops/events serves to further qualify doctoral candidates.</i>
Interdisciplinary qualification workshop
In-depth specialist event on the topics of the <i>digital society</i> and <i>Human-technology interaction</i>
Event on research methods
University didactic workshop
Further training (usually at least 1 day)
Summer schools, winter schools or comparable events
Language course
Lecture series of other departments
Focus IV: Science communication and other transfer services
<i>The focus on science communication and other transfer services serves to develop skills in the field of science communication and transfer</i>
Information event, conference or workshop for companies, the public sector or organizations
Application for a relevant patent
Founding a relevant start-up
Integration into academic teaching
Research stay with a connection to a research institution or university (at least 2 weeks) and submission of a report on the results, also internationally
Internship in an area that is relevant to your future career (at least 2 weeks)
Organization of a scientific or transfer conference/event
Activities in academic self-administration and committee work (e.g. spokesperson of doctoral candidates or membership in appointment committee)
Organization of an exhibition

Sample schedule for the services to be provided

Exemplary course of studies for the doctoral program ,Human, Digitality, Society'

