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IT:U – Kommunikations- und Informationsplattform

Verlautbarungsteil

Jahrgang 2026 **Ausgegeben am 18. Juni 2026**

Nr. 0027 Kundmachung: **Beschluss des Gründungskonvents zum Curriculum PhD Programm „Interdisciplinary Computing“**

Beschluss

des Gründungskonvents der Interdisciplinary Transformation University, mit dem das Curriculum „Interdisciplinary Computing“ erlassen wird

Der Gründungskonvent der Interdisciplinary Transformation University Austria hat in seiner Sitzung vom 15. Juni 2026 beschlossen das Curriculum des PhD Studiums „Interdisciplinary Computing“ in der aus der Beilage ersichtlichen Fassung zu erlassen.

1 Beilage

Signiert von:	Claudia Margit Von Der Linden
Datum:	19.06.2026 11:44:12

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Die Vorsitzende des Gründungskonvents:
Claudia von der Linden

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Promulgation Section

Volume 2026 **Issued on June 18th, 2026**

Nr. 0027 Announcement: **Resolution of the Founding Convention on the Curriculum of the PhD program „Interdisciplinary Computing“**

Resolution

of the Founding Convention of the Interdisciplinary Transformation University, enacting the Curriculum for the PhD program „Interdisciplinary Computing“

The Founding Convention of the Interdisciplinary Transformation University Austria resolved in its meeting of 15 June 2026 to enact the curriculum for the PhD programme “Interdisciplinary Computing” in the version set out in the annex.

1 Annex

The Chair of the Founding Convention:

Claudia von der Linden

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Curriculum

PhD program

Interdisciplinary Computing

Validity:
The Founding Convention adopted the following curriculum on XX.XX.XX

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§ 1 Basis and Applicability:

The legal basis for the PhD program "Interdisciplinary Computing" is the Federal Act on the Institute of Digital Sciences Austria (Interdisciplinary Transformation University) BGBl. I No. 43/2024.

The Founding Convention enacted the following curriculum on XX.XX.XX.

§ 2 Program Description and Objectives

The PhD program “Interdisciplinary Computing” of the Interdisciplinary Transformation University (IT:U) offers the opportunity for high impact research across industry and with multi-stakeholder collaborations. The program supports researchers with a firm foundation and early publications or professional experiences. PhD candidates participate in research from the start of the program and deepen their skills and exposure to other ways of working through coursework. The Interdisciplinary Research Seminar provides both exposure and professionalization throughout the whole program.

PhD students sharpen skills in key areas of digital transformation in close collaboration with industry, external partners and identified projects supported by third-party external funding. This enables students to develop a high degree of proficiency and professional exposure while their research contributes to key processes and conversations in research, economy and society.

§ 3 Qualification profile

The program in “Interdisciplinary Computing” is located within the IT:U Doctoral School. The IT:U Doctoral School enables young researchers to conduct independent research at a high international level, thereby contributing to scientific, technological and societal progress. The students learn to identify and analyze research gaps and societal issues and to find solutions through interdisciplinary approaches. They work on developing and implementing new technologies that drive digital transformation. In addition to subject-specific knowledge, interdisciplinary key competencies are also promoted to prepare students for leadership positions in academia, industry, or the public sector.

§ 4 Duration and Scope

The planned duration of the PhD program “Interdisciplinary Computing” is 3 years. An academic year comprises 60 ECTS credits, with one ECTS credit corresponding to 25 working hours. With 6 semesters, this sums up to 180 ECTS – 150 ECTS thesis, 30 ECTS coursework. The program can be extended as necessary.

§ 5 Admission to the Program

To be admitted to a PhD program at IT:U, candidates must have completed a master's degree in a relevant field of study or another relevant program of at least the same academic level at a recognized domestic or foreign post-secondary educational institution.

General admission regulations are specified in the respective part of the bylaws.

§ 6 Program Structure

The program conveys content and necessary qualifications through a series of modules. A module is defined by specific entry and exit qualifications, the subject matter, teaching methods, the required workload, and the criteria for performance evaluation. Modules are completed in the form of one or more thematically related courses. There are no additional course types beyond those specified in the bylaws. Figure 1 provides an overview.

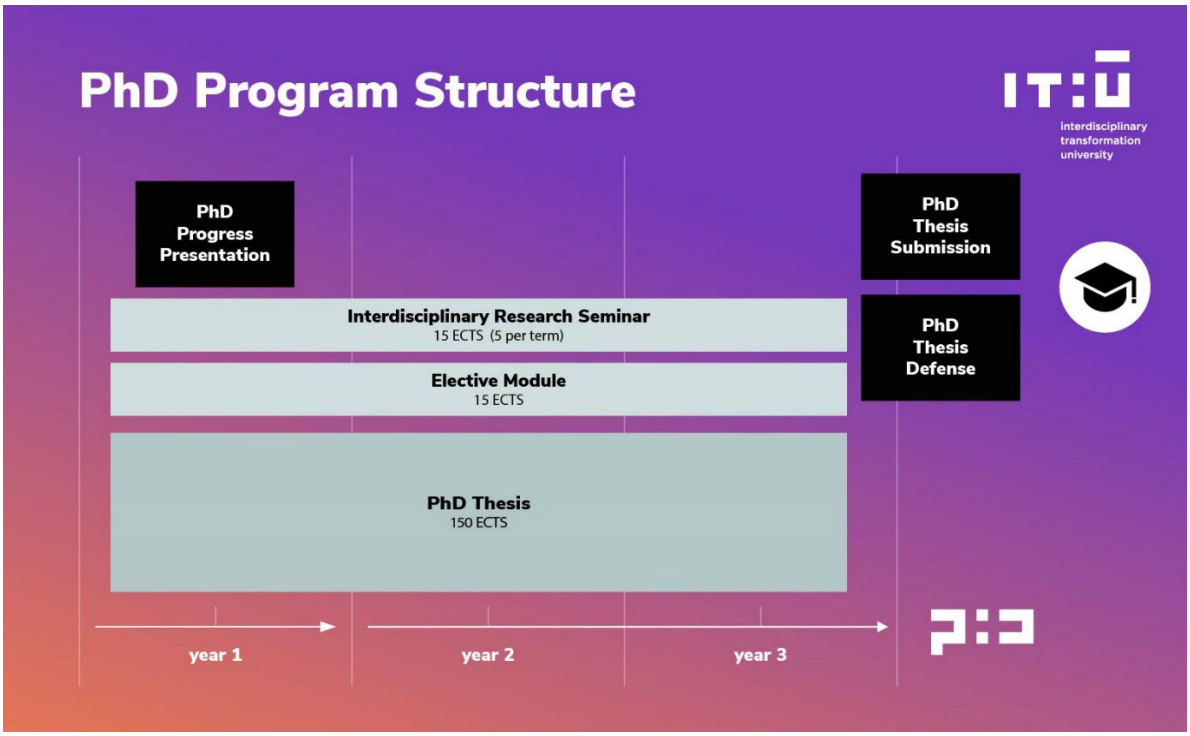

Figure 1: PhD Program Structure

§ 7 Feasibility of Study and Mobility

The IT:U gives all qualified students, regardless of their personal circumstances, the opportunity to complete their degree within the intended three years. As part of the "feasibility of study“, the workload of the program is defined, the organization of exams regarding dates and deadlines is made transparent, and appropriate advising and support services for students are provided. However, support is limited by the necessity of showing independence and personal responsibility as part of the PhD journey.

The social dimension of feasibility focuses on enabling students to complete their studies within the standard period, irrespective of gender, age, social and ethnic background, physical and mental disabilities, religion, beliefs, sexual orientation, or other diversity characteristics. The compatibility of studies with personal caregiving responsibilities and/or personal circumstances is ensured through individually tailored support measures.
Mobility opportunities for students are available from begin of study, provided they do not hinder the timely completion of the PhD. The IT:U supports students in organizing these mobility experiences.

§ 8 Thesis

1) A doctoral thesis (dissertation) must be completed as part of the PhD program. It serves to demonstrate the ability to independently address scientific questions. The thesis is a written work and can be composed as a monograph or as a collection of thematically related publications (cumulative dissertation).
2) The thesis must be written under the guidance of a primary supervisor. The primary supervisor must be a faculty member of the Interdisciplinary Transformation University with teaching authorization in the respective area of the dissertation.
3) In addition to the primary supervisor, additional secondary supervisors may be appointed due to interdisciplinarity. They must also hold a habilitation (or equivalent) in a field relevant to the thesis and can be from another domestic or recognized foreign university.
4) A change of supervisor can be requested from the Founding President. In the event of the primary supervisor's absence, a substitute supervisor will be assigned.
5) The thesis topic and the supervisors must be agreed upon before the start of the PhD program. Before the end of the first semester the thesis topic must be presented before the program committee in a PhD progress presentation. The program committee decides by majority whether the progress is accepted, and the student can continue their studies.
6) It is recommended that completed parts of the thesis project are published in international journals or conferences.
7) The thesis project must comply with the ethical guidelines of the Interdisciplinary Transformation University and, if necessary, obtain approval from the relevant ethics committee.
8) The completed thesis must be formally submitted and is evaluated by two reviewers, at least one of whom must belong to an external university or research institution. Supervisors cannot act as reviewers for dissertations they have supervised. If the dissertation is positively evaluated by both reviewers, registration for the final oral examination (Rigorosum) can proceed.

§ 9 PhD Thesis Defense (Rigorosum)

1) PhD Thesis Defense is the final comprehensive examination of the PhD program and serves to confirm the candidate's ability to conduct independent research and defend their thesis.
2) A public defense of the thesis is followed by an oral examination conducted by a thesis committee. The defense includes a presentation of the thesis and a question-and-answer session, where the candidate explains and defends their research to the thesis committee.
3) The Defense can take place once all the requirements specified in the curriculum, including the completed thesis, have been fulfilled.
4) The thesis committee consists of at least three members. One of the members is the primary supervisor, and the other members are usually the reviewers of the dissertation.
5) The Defense is chaired by the chairperson of the thesis committee. The chair is appointed by the Founding President. Virtual participation in the Defense is possible with prior approval from the thesis committee, ensuring all technical requirements for a smooth process are met.
6) The Defense has a maximum duration of 120 minutes and includes a public presentation by the candidate followed by a discussion of the presentation content.
7) The evaluation of the Defense is conducted by the thesis committee based on the quality of the presentation and the discussion. The final comprehensive examination is assessed according to the following grading scale:
    1. Passed with distinction: for an outstanding performance.
    2. Passed with merit: for a significantly above-average performance.
    3. Passed: for a satisfactorily passed examination.
    4. Failed: for an inadequate performance.

   The result is to be communicated to the candidate immediately after the examination.

§ 10 Academic Degree and Graduation

Graduates of the PhD program "Interdisciplinary Computing" will be awarded the academic degree "Doctor of Philosophy" – abbreviated "PhD."

§ 11 Effective Date

This curriculum comes into effect on xx.xx.20xx.

§ 12 Transitional Provisions

No transitional provisions are provided.

§ 13 Appendix 1 – Module Descriptions

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Appendix 1 – Module Descriptions

PhD program

Interdisciplinary Computing

Module plan

Studies are divided into modules. A module is a self-contained learning unit with content and methods that are thematically and temporally cohesive, delivered through one or more compulsory or elective courses. In additon to the thesis, students taking the Interdisciplinary Computing PhD are required to complete 15 ECTS electives and 15 ECTS of Interdisciplinary Research Seminar. These courses support the development of the thesis, help students to develop an interdisciplinary practice, and connect PhD students across all degree programs.

Module **"Interdisciplinary Research Seminar"**	
Abbreviation	IntdResSem
Type	Compulsory module
ECTS points	5
Semester	2, 4, and 6
Frequency	Every year
Module exam	No
Prerequisite	None
Description	The Interdisciplinary Research Seminar serves as a module to ensure that students receive a strong interdisciplinary training and opportunities for exchange, professionalization into their research field, and exposure to cross cutting themes. The Interdisciplinary Research Seminar is a flexible format including recognition of conferences, poster sessions, peer research presentations (chalk talks) and others. Completing the Interdisciplinary Research Seminar gives students exposure to the distinctive form of interdisciplinarity practiced at IT:U and links students into a supportive scientific community across all IT:U degree programs.

Course **"Interdisciplinary Research Seminar Series"**	
Abbreviation	IntdResSem
Type	Compulsory course
Course type	SEM
ECTS points	5
Semester	2, 4, and 6
Frequency	Every year
Description	This course is designed to support PhD students through the entire process of developing their dissertations, with a focus on interdisciplinary research. It connects students across PhD programs and is a primary forum for the development and transmission of interdisciplinary knowledge and practice at IT:U. Over the span of three

	semesters, students will engage in a series of workshops, seminars, and collaborative projects that explore the theories, methodologies, and practical challenges of conducting research across disciplinary boundaries. The course emphasizes the integration of diverse perspectives, fostering innovation, and addressing complex research questions that require interdisciplinary approaches.
Learning outcomes	After successfully completing the course, students will be able to ... • understand and discuss the importance of interdisciplinary research in addressing complex societal and academic challenges • demonstrate the ability to apply interdisciplinary approaches to their PhD thesis, including the identification of appropriate research questions and hypotheses • effectively communicate and collaborate with peers and faculty from various disciplines to enrich their research • identify and overcome common barriers to interdisciplinary research, such as differing terminologies, research methods, and evaluation criteria
Content	• Introduction to interdisciplinary research concepts and planning • Developing and refining interdisciplinary research strategies • Advanced interdisciplinary research techniques and collaboration • Synthesis, presentation, and reflection on interdisciplinary research
Previous knowledge	None
Assessment	Courses with continuous assessment

Module **"Elective Module"**	
Abbreviation	Various
Type	Compulsory module
ECTS points	5
Semester	1, 3, and 5
Frequency	Every semester
Module exam	Various
Prerequisite	Various
Description	The electives that are offered vary by term. They are offered through IT:Us elective course catalogue and reflect current research and the individual needs of the students. From the available electives, courses are selected with the guidance of the supervisor to both support the completion of the thesis and provide opportunities for skills development (in depth or breadth). Electives offer the optional opportunity to gain exposure to the IT:U learning model and project-based teaching and learning.

Course Example "**Advanced Machine Learning and Deep Learning**"	
Abbreviation	AdvML
Type	Elective Course
Course type	PIC
ECTS points	5
Semester	1
Frequency	Every year
Description	This course delves into advanced machine learning and deep learning topics, building on foundational knowledge to explore more complex algorithms and techniques. Students will gain a deep understanding of advanced supervised and unsupervised learning methods and neural network architectures such as convolutional neural networks and large language models. The course also covers deep learning frameworks, e.g. TensorFlow or PyTorch, for practical model implementation and deployment. Special emphasis will be placed on optimization techniques, model tuning, and real-world applications. Ethical issues and challenges related to deep learning, such as data privacy and the interpretability of

	complex models, will also be discussed. By the end of the course, students will be equipped to develop, train, and evaluate models for complex data-driven tasks.
Learning Outcomes	After successfully completing the course, students will be able to… • understand and apply advanced machine learning techniques. • understand deep learning models using various neural network architectures e.g. convolutional neural networks (CNNs), recurrent neural networks (RNNs), Generative Adversarial Networks (GANs), Large Language Models (LLMs). • utilize deep learning frameworks, e.g. TensorFlow and PyTorch for building, training, and deploying complex models. • optimize deep learning models. • evaluate model performance using advanced metrics and addresschallenges during training. • analyze real-world applications of deep learning in various fields, e.g. computer vision, natural language processing, time series analysis. • address ethical considerations and challenges in deep learning, including model interpretability, bias, and data privacy.
Content	• Review of advanced machine learning techniques, e.g. ensemble methods (bagging, boosting), support vector machines, and dimensionality reduction techniques. • Introduction to deep learning architectures, e.g. feedforward networks, CNNs, RNNs, LLMs • Deep learning frameworks, e.g. TensorFlow or PyTorch. • Model optimization, e.g. hyperparameter tuning, regularization, dropout, and batch normalization. • Advanced topics in deep learning: GANs, autoencoders, and transfer learning. • Evaluation and performance metrics, e.g. precision, recall, F1 score, AUC-ROC, and confusion matrix. • Applications of deep learning in fields such as computer vision (image classification, object detection), natural language processing (text classification, sentiment analysis), or time series forecasting. • Ethical considerations: fairness, bias, and data privacy in complex models.
Previous Knowledge	Introduction to Machine Learning
Assessment	Courses with continuous assessment

Module **"PhD Thesis"**	
Abbreviation	PhD Thesis
Type	Compulsory module
ECTS points	150
Semester	1-6
Frequency	Every semester
Module exam	No
Prerequisite	
Description	The PhD thesis is the major research work of the PhD program. It severs to demonstrate scientific independence and can be completed either as a monograph or through cumulative publications.

"PhD Thesis"	
Abbreviation	PhD Thesis
Type	Compulsory course
Course type	
ECTS points	150
Semester	1-6
Frequency	Every semester
Description	Within the context of the PhD thesis the students will develop their thesis involving processes like shaping and deepen a research question or hypothesis, conducting in-depth research, and systematically organizing the findings into a coherent and well-supported argument. It culminates in the creation of a thesis document that presents original contributions to knowledge within a specific field of study.
Learning outcomes	After successfully completing the course, students will be able to ... • formulate clear and feasible research questions or hypotheses for their PhD thesis • design a detailed research plan, including methodology, data collection, and analysis strategies, that aligns with their research objectives • identify, evaluate, and synthesize relevant literature to establish a strong theoretical foundation for their research • critically assess existing research to identify gaps that their thesis will address

	• apply appropriate research methodologies and techniques to collect and analyse data • adapt and refine their research approach based on ongoing findings and feedback from peers and faculty • develop a clear and coherent structure for their dissertation • participate in peer review sessions, offering and receiving constructive feedback to enhance the quality of their research • incorporate feedback from supervisors, peers, and other faculty members to refine their thesis • articulate and defend their research findings in both written and oral formats • develop presentation skills and strategies for effectively communicating complex research to academic and non-academic audiences
Content	
Previous knowledge	None
Assessment	PhD thesis examination and thesis defence