

北陸先端科学技術大学院大学研究室教育指針
Laboratory Education Guideline

研究室教育指針は、学則第30条の3に基づき、研究指導の方法及び内容並びに修了までの研究指導の計画をあらかじめ明示するものです。

Based on the Article 30-3 of the general academic rules, the Laboratory Education Guideline is intended to clearly outline the methods and content of research guidance, as well as the plan for research guidance until completion.

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1. 研究テーマ / Research Theme

Human-Centered AI Laboratory is dedicated to pioneering algorithm and interface technologies that integrate human intelligence with artificial intelligence. We focus on professional design domains, including anime, architecture, fashion, and robotics, and advancing creativity support research built on generative AI and computer graphics.

Our research fields span a broad range of fields: Image and Video Generation, Physical AI, Sketch-based Interfaces, and Human-AI Interaction. Beyond advancing AI technology itself, we continually ask how these technologies can expand human creativity and contribute to society.

2. 修得が期待される能力 / Competencies expected to be acquired

研究室教育は必修 A 科目（先端）又は研究支援科目（融合）の一部として単位化されており、この欄はそれら科目のシラバス上の達成目標の一部となります。

Laboratory Education is accredited as a part of the Required courses A (Division of Advanced Science and Technology) or Research Support Courses (Division of Transdisciplinary Sciences), and this section constitutes a part of the course goals stated in the syllabus for such subjects.

Human-Centered AI Laboratory provides research supervision for both master's and doctoral students under the Knowledge Science and Information Science degree programs. Guided by research themes and approaches tailored to each program, we aim to cultivate future value creators who will lead Society 5.0, a human-centered super-smart society. Across all programs, we emphasize the development of three core competencies: interdisciplinary thinking that transcends traditional academic boundaries, the ability to leverage information for problem-solving, and the capacity to generate innovation from a broad, panoramic perspective. Our lab fosters an environment where researchers with diverse expertise learn from one another through mutual respect and constructive collaboration, naturally building interdisciplinary knowledge through daily research activities.

Master's students are anticipated to engage in developing human-centered technologies that bridge cyberspace and physical space, cultivating practical problem-solving skills through the application of generative AI and Physical AI. For doctoral students, we aim to establish a comprehensive supervision and collaborative research framework designed to pursue cutting-edge research in our core areas and to achieve publications at top-tier international conferences and journals.

3. 研究指導方針 / Research Guiding Principle

Human-Centered AI Laboratory aims to develop students' practical research capabilities through teamwork, while respecting individual initiative, as they tackle research challenges in human-centered AI and its applications. Research supervision is structured around two complementary pillars: individual projects and collaborative projects. Through individual projects, students develop the ability to formulate their own research questions and pursue independent inquiry. Through collaborative projects including university collaboration with leading researchers worldwide and industry-academia joint research, students can gain experience in approaching problems from diverse perspectives. Together, these activities cultivate both strong research execution skills and effective communication abilities.

We actively provide opportunities for presenting at international conferences and publishing in international journals, fostering the skills needed to thrive in the global

research community. Students are supported in clarifying their own potential and research vision while working toward world-class research outcomes. For both master's and doctoral students, every student should grow into a researcher who independently formulates questions and explores solutions. The role of the supervisor is not to provide answers, but to serve as a companion who helps sharpen the quality of the questions being asked.

4. 研究室活動の内容及び方法 / Content and Methods of Laboratory Activities

日次活動 / Daily Activities :

週次活動 / Weekly Activities :

Lab seminar (weekly, all members), Knowledge Science doctoral seminar (weekly, doctoral students of Knowledge Science degree only), Information Science doctoral seminar (weekly, doctoral students of Information Science degree only)

月次活動 / Monthly Activities :

不定期活動 / Occasional Activities :

Research Activities: Individual research meetings (monthly), collaborative research meetings with domestic and overseas university researchers, industry-academia joint research meetings, intra-university collaborative research meetings, intra-lab collaborative research meetings

External Activities: Invited talks by domestic and international researchers, research presentations at domestic conferences, research presentations at international conferences, joint seminars with research groups at domestic and international institutions, internships, research ethics training

5. 年間スケジュール / Annual Schedule

本学の全学共通の年間スケジュールは「履修案内」の「学位取得に至るスケジュール」を参照してください。(本学HP 参照: ホーム>教育>履修関係>履修案内)

Please refer to the “Degree conferment schedule for the master’s program/doctoral program” in the “Degree Completion Guide” for university-wide common schedule (JAIST website: Home >Education>Taking Courses>Degree Completion Guide)

Human-Centered AI Laboratory conducts the following academic activities throughout the year:

- Regular reading groups on papers at top-tier conferences such as SIGGRAPH
- Collaborative research projects for M1/D1 students to acquire practical research skills
- Study sessions on the latest advances in generative AI