

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
We focus on game informatics, investigating intelligent decision-making and behavior in board games, puzzles, and video games. By employing tree search, supervised learning, and reinforcement learning, we study both strong game-playing AI and entertaining game AI that enhances player experience. We also apply insights gained from games to broader AI research and general decision-making problems.
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.
Students are expected to acquire fundamental and advanced knowledge in games and AI, and to develop the following competencies through research activities: <ul style="list-style-type: none">◆ Ability to formulate research problems in game AI and solve them using appropriate methods◆ Ability to survey, understand, organize, and summarize related work◆ Ability to formulate hypotheses and verify them through experiments and analysis◆ Ability to think logically and critically, and to evaluate results objectively◆ Ability to clearly explain research ideas and results using text and figures◆ Ability to write scientific papers and technical reports following standard structures and conventions in the field◆ Ability to understand and comply with research ethics and information ethics in research activities
3. 研究指導方針 / Research Guiding Principle
Research topics are determined through consultation while respecting students' interests. New students are provided with materials on research methodology and presentation skills, as well as practice projects, to build a solid foundation for research activities. The goal is for students to achieve research outcomes with domestic conference presentation as a reference level, while also aiming for higher standards as appropriate, with continuous guidance provided according to their progress.
4. 研究室活動の内容及び方法 / Content and Methods of Laboratory Activities
<input type="checkbox"/> Daily Activities: Brief meeting around noon (approximately 10 minutes) <input type="checkbox"/> Weekly Activities: Seminar (once per week, presentation about once per month), week report (mail, once per week, Friday) <input type="checkbox"/> Monthly Activities: Individual meeting (once per month) <input type="checkbox"/> Occasional Activities: 10-minute scientific presentations for new M1 students, mini-research projects for new M1 students, attendance at conferences/workshops, presentation at conferences/workshops

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)

The following is an example assuming a master’s student who completes the program in two years, and it may be flexibly adjusted according to the research topic and progress. Depending on the student’s situation, some may advance their research at an early stage, while others may choose the M α program.

- ◆ **M1 (first semester):** Students focus mainly on coursework. Participation in company internships during the summer vacation is recommended. Among these, internships with a duration of two weeks or longer may be treated as a substitute for the minor research.
- ◆ **M1 (second semester):** Students conduct 10-minute scientific presentations and mini-research projects. Participation in the domestic conference Game Programming Workshop is recommended, and the research topic is determined. Students may also begin job-hunting activities.
- ◆ **M2 (first semester):** After securing a job offer, students place emphasis on research activities. If the minor research has not yet been completed, it is completed at this stage, and students then concentrate on the main research.
- ◆ **M2 (second semester):** Students bring their research to a conclusion and present their results at academic conferences. Examples of domestic venues include the Game Programming Workshop and the Meetings of the Game Informatics Research Group.