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
Constraint programming technique for cyber-physical systems
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.
You will learn theories and techniques to model/design/implement/verify cyber-physical systems (CPSs), which are often safety critical. You will work on proposing original methods, implementing tools, and conducting experiments with the aim of software quality assurance in CPS. This will enable you to acquire the basic skills that will be useful in a wide range of CPS and software-related professions. Each student is encouraged to learn basic skills by conducting a whole research process, consisting of survey, problem formalization, system development, experimentation, publication of a paper, etc.
3. 研究指導方針 / Research Guiding Principle
We hold regular meetings for the whole lab or for small groups, where we learn the basics of related fields (e.g. programming, software engineering, formal methods, control engineering, machine learning), investigate the latest research trends, and report on each member's progress. Each student can choose to work either on an existing theme or on a free theme that is related to the lab's specialty.
4. 研究室活動の内容及び方法 / Content and Methods of Laboratory Activities
□Daily Activities: □Weekly Activities:　Lab seminars, individual meetings (once per week) □Monthly Activities:　Entire lab seminars, lunch meetings □Occasional Activities:　Joint seminars with other labs on campus, technical study sessions, conference presentations, research and retreat camps
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)
Master’s Program M1 first half: Read relevant books and papers aiming at master's thesis topic. M1 second half: Determine the thesis topic and the research plan. M2 first half: Formulate the core problem, design and implement the proposed method, and prepare the experimental environment. Conduct a mid-term presentation. M2 second half: While deepening research and conducting experimental evaluation, write the master's thesis. Later, finalize the thesis and prepare for the defense. Simultaneously, consider presenting at a workshop.

Doctoral Program

It is encouraged to publish at least one journal paper and at least two international conference papers. Accordingly, these research outcomes are compiled into a doctoral dissertation.

D1-D2: Based on the Master's reseach and/or previous research, you aim to achieve a more complete outcome. Write a paper and present them at an international conference and/or in a journal. Develop your research topics into a doctoral dissertation theme and prepare a research plan.

D2-D3: Work on an extended topic or a secondary key topic, and present the outcome at an international conference. Work on writing the doctoral dissertation and preparing for the defense.