

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
Synthesis, Spectroscopic Characterization, and Optical Functional Applications of Inorganic Solid-State Materials Our research focuses on inorganic phosphors, persistent phosphors, and transparent ceramics. We conduct comprehensive studies covering material synthesis (inorganic solid powders, ceramics, glass, and single crystals), spectroscopic characterization (X-ray diffraction, fluorescence lifetime measurement, vacuum ultraviolet spectroscopy, high-pressure experiments, etc.), and their practical applications.
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. Through education in this laboratory, students aim to acquire the following competencies: Knowledge and Skills: The ability to independently implement and complete advanced material synthesis techniques and precise physical property measurement techniques (structural analysis, optical characterization, temperature dependence, high-pressure experiments, etc.) based on specialized knowledge of solid-state chemistry and spectroscopy. Thinking and Planning: The ability to identify or set research themes and systematically promote the research cycle of "synthesis, characterization, and application" based on logical thinking. Communication: Proficiency in reading English academic papers through journal clubs and progress meetings, and presentation skills to logically and persuasively communicate research results in international journals and at academic conferences.
3. 研究指導方針 / Research Guiding Principle
Our laboratory aims to foster researchers who possess both high expertise and a broad perspective by experiencing the entire process from "creation" and "evaluation" of materials to "social implementation (application)." Through weekly progress meetings and journal clubs, students develop problem-solving skills via interactive dialogue. Furthermore, we provide extensive support for students to gain experience in presenting at domestic and international conferences and to ultimately publish international journal papers as the first author.
4. 研究室活動の内容及び方法 / Content and Methods of Laboratory Activities
<input type="checkbox"/> 日次活動 / Daily Activities : Core time (9:00 AM – 5:00 PM). Students ensure research time based on a disciplined daily routine. <input type="checkbox"/> 週次活動 / Weekly Activities : Research progress meetings (once a week), Journal club (presentation of the latest English papers, once a week).

月次活動 / Monthly Activities : Individual meetings (conducted as needed depending on progress).

不定期活動 / Occasional Activities : Research presentations, Industry-academia collaboration meetings, Presentations at domestic and international conferences, Experiments at external joint research institutions.

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)

In April, we conduct a "New Student Orientation" to provide training on the safe use of experimental equipment and basic synthesis/evaluation procedures. In December, a "Laboratory Interim Progress Meeting" is held to organize research results obtained through the autumn and to clarify tasks for the end of the fiscal year. The goal for M1 students is to present at domestic conferences within the year, while M2 and Doctoral students aim to present at international conferences and write/submit international journal papers. By presenting at external academic venues at least once before completion, students develop an objective perspective through discussions with experts and enhance the quality of their dissertations.