

Curriculum Policy of the Graduate School of Science, Technology and Innovation

Master's Program

Based on the Kobe University Curriculum Policy, the Graduate School of Science, Technology and Innovation organizes the curriculum of the Master's Program according to the following policies.

In order to achieve its goals, the Graduate School offers Special Courses (Advanced Courses in Biotechnology and Environmental Technology, Advanced Courses in Advanced Information and Communication Technology and Advanced Courses in Advanced Medical Science) to foster knowledge of a wide range of specialist fields in the natural sciences and an interdisciplinary perspective.

We also provide education to equip students with the necessary skills from the basics of commercialization to the process itself, through Special Courses (Entrepreneurship Courses) and a Course in Project-Based Learning for Entrepreneurship.

By combining these courses with thesis guidance, we foster rich creativity and practical problem-solving abilities.

This policy is implemented based on the Degree Policy of this Graduate School through a systematic curriculum of courses as detailed in the following table (curriculum map).

- Subjects listed in the curriculum map, such as “Innovation and Entrepreneurship”, are established to empower students to acquire knowledge and the capacity to solve problems in collaboration with people in various positions.
- Subjects listed in the curriculum map, such as “Entrepreneurship and Law”, are established to motivate students to understand the impact of science and technology on society, and acquire the ability to act appropriately based on a strong ethical foundation.
- Courses listed in the curriculum map, such as “Industrial Technology Practice”, are established so that students can acquire the ability to consider topics from an interdisciplinary and multifaceted perspective.
- Courses listed in the curriculum map, such as “Project-Based Learning for Entrepreneurship in Science and Technology” are established so that students can set their own challenges for creating new social values through science and technology, and gain the ability to work towards their realization.
- Subjects such as “Presentation Exercises” listed in the curriculum map are established to enable students to pursue research from a global perspective and gain the ability to share their results logically and clearly.
- Courses listed in the Curriculum map such as “Advanced Project Research” are established to empower students to acquire the ability to conduct research from a professional and interdisciplinary perspective by gaining outstanding expertise in their research field as well as basic knowledge of other fields and entrepreneurship.

These courses are conducted through a combination of individual research guidance and methods of active learning, such as group work or discussion. In particular, more practical

education is conducted by introducing “Project-Based Learning” (PBL) in the course entitled Project-Based Learning for Entrepreneurship.

Evaluation of learning outcomes will be conducted in a multi-dimensional and comprehensive manner in line with the respective learning objectives.

Doctoral Program

Based on the Kobe University Curriculum Policy, the Graduate School of Science, Technology and Innovation organizes the doctoral course curriculum according to the following policies.

The Graduate School offers the following courses:

- “Advanced Science and Technology Research” to cultivate the expertise and capabilities in research and development necessary to instigate scientific and technological breakthroughs through multi-dimensional research that combines knowledge of each area related to advanced science and technology.
- “Research on Science, Technology and Innovation” to cultivate the ability to provide innovative ideas that will produce economic and social value based on scientific and technological breakthroughs, and coming up with focal topics for scientific and technological breakthroughs that will lead to innovative ideas
- “Science and Technology Entrepreneurship” to foster research and development capabilities in addition to the practical skills of strategic entrepreneurship to enable students to make research reports on the research development process for turning an innovation idea into a concrete innovation, or on the construction of a practical innovation strategy.

Combined with dissertation supervision, this curriculum will foster global entrepreneurs in the fields of science and technology.

Specifically, based on the “Degree Awarding Policy (Diploma Policy)” of the graduate school, the following systematic curriculum is organized and implemented in accordance with each learning objective shown in the following table (curriculum map).

- “Research on Science, Technology and Innovation 1” is established to empower students to gain varied knowledge and the capacity to solve problems in collaboration with people in various positions.
- Courses shown in the curriculum map such as “Advanced Science and Technology Research” are established so that students can understand the impact of science and technology on society and act appropriately based on a strong ethical foundation.
- Students will learn how to produce research results leading to breakthroughs in science and technology based on advanced expertise in scientific fields, and design new product and service concepts (innovative ideas) that will produce economic and social value. Therefore,

we have established subjects shown in the curriculum map such as “Research on Science, Technology and Innovation 2” to equip students with the capacity to pursue breakthroughs in scientific and technological design themes leading to innovative ideas.

- “Science and Technology Entrepreneurship” is established to empower students to gain the ability to formulate high-quality innovation strategies (strategies for R&D and commercialization) that can actually be implemented, such as connecting innovative ideas to concrete innovations and launching independent spin-off businesses or entirely new businesses.
- Courses listed in the curriculum map such as “Advanced Science and Technology Research” are established to empower students to pursue research from a global perspective and acquire the ability to share their results logically and clearly.
- Subjects shown in the curriculum map such as “Science, Technology and Innovation Strategy Project Research,” are established so that students can acquire abilities that will lead them to original science and technology breakthroughs by exploring them from multiple perspectives while incorporating knowledge from different specialized fields of advanced science and technology (Bioproduction, Advanced Membrane Technology, Advanced Information and Communication Technology, and Advanced Medical Science).

These courses are conducted through a combination of individual research guidance and methods of active learning, such as group work or discussion.

Evaluation of learning outcomes will be conducted in a multidimensional and comprehensive manner in line with the respective learning objectives.