Diploma Policy of the Graduate School of Engineering

The purpose of the Kobe University Graduate School of Engineering is to conduct education and research aimed at developing an understanding of nature to serve humanity, pursuing the principles of nature to solve social issues, and building a sustainable society in which people can live in harmony with nature. In accordance with the educational philosophy of "shaping values that generate creativity" and the research philosophy of "developing science and technology and promoting their application to society," the Graduate School of Engineering is committed to contributing to the creation of a society where all can live happily and safely. Students are expected to learn about cutting-edge technology in depth and develop a good understanding of the impact that such technology has on society, which is made up of diverse values.

In order to achieve these objectives, the graduate school awards master's degrees in accordance with the following policies:

Master's Program

Degree: Master of Engineering

Department of Architecture

Based on the Kobe University Diploma Policy, the Department of Architecture of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies in the master's program of the graduate school for a minimum of two years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study before passing the viva and final examination of their master's thesis or the results of their specific research themes. However, students who demonstrate excellent performance may be allowed to complete their studies after the first year.
- Prior to completion, students of the Department of Architecture are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:
  - High level specialized knowledge of architecture and a broad academic expertise, in addition to the ability to think from an interdisciplinary perspective.
  - Outstanding advanced expertise in architecture and the in-depth academic knowledge of a researcher in this field.
  - The ability to explore the social roles expected of architecture and to utilize their advanced expertise and abilities to contribute towards the creation of a sustainable society.

Department of Architecture (Digital Medical Engineering Creation Course)

Based on the Kobe University Diploma Policy, the Department of Architecture (Digital Medical Engineering Creation Course) of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies in the master's program of the graduate school for a minimum of two years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study before passing the viva and final examination of their master's thesis or the results of their specific research themes. However, students who demonstrate excellent performance may be allowed to complete their studies after the first year.
- Prior to completion, students of the Department of Architecture (Digital Medical Engineering Creation Course) are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:
  - The ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering.
  - High level specialized knowledge of architecture and the ability to think from an interdisciplinary perspective.
  - Outstanding advanced expertise in architecture and the in-depth academic knowledge of a researcher in this field.
  - The ability to explore the social roles expected of architecture and to utilize their advanced expertise and abilities to contribute towards the creation of a sustainable society.

Department of Civil Engineering

Based on the Kobe University Diploma Policy, the Department of Civil Engineering of the Faculty of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies in the master's program of the graduate school for a minimum of two years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study before passing the viva and final examination of their master's thesis. However, students who demonstrate excellent performance may be allowed to complete their studies after the first year.
- Prior to completion, students of the Department of Civil Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:
  - Advanced specialist competence.
  - Advanced practical expertise backed by diverse interdisciplinary perspectives and

specialized knowledge, which covers traditional civil engineering.
- Ability to address and solve unfamiliar problems by applying advanced technology.
- Ability to address problems in a comprehensive manner.

Department of Civil Engineering (Digital Medical Engineering Creation Course)

Based on the Kobe University Diploma Policy, the Department of Civil Engineering (Digital Medical Engineering Creation Course) of the Faculty of Engineering, awards this academic degree in accordance with the policies described below.

- Students must engage in studies in the master's program of the graduate school for a minimum of two years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study before passing the viva and final examination of their master's thesis. However, students who demonstrate excellent performance may be allowed to complete their studies after the first year.
- Prior to completion, students of the Department of Civil Engineering (Digital Medical Engineering Creation Course) are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:
  - The ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering.
  - Advanced specialist competence.
  - Advanced practical expertise backed by diverse interdisciplinary perspectives and specialized knowledge, which covers traditional civil engineering.
  - Ability to address and solve unfamiliar problems by applying advanced technology.
  - Ability to address problems in a comprehensive manner.

Department of Electrical and Electronic Engineering

Based on the Kobe University Diploma Policy, the Department of Electrical and Electronic Engineering of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies within the graduate school for a minimum of two years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study before passing the viva and final examination of their master's thesis. Students who demonstrate excellent research may complete the program before the end of the two-year term.
- Prior to completion, students of the Department of Electrical and Electronic Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:

・Wide-ranging academic expertise and the ability think from an interdisciplinary perspective.
・Advanced knowledge and expertise related to the fields of physical electronics or computer and information engineering.
・The ability to apply knowledge of electrical and electronic engineering to creative thinking to accomplish challenges.

Department of Electrical and Electronic Engineering (Digital Medical Engineering Creation Course)

Based on the Kobe University Diploma Policy, the Department of Electrical and Electronic Engineering (Digital Medical Engineering Creation Course) of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

・Students must engage in studies within the graduate school for a minimum of two years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study before passing the viva and final examination of their master's thesis. Students who demonstrate excellent research may complete the program before the end of the two-year term.
・Prior to completion, students of the Department of Electrical and Electronic Engineering (Digital Medical Engineering Creation Course) are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy
  ・The ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering.
  ・Advanced knowledge and expertise related to the fields of physical electronics or computer and information engineering.
  ・The ability to apply knowledge of electrical and electronic engineering to creative thinking to accomplish challenges.

Department of Mechanical Engineering

Based on the Kobe University Diploma Policy, the Department of Mechanical Engineering of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

・Students must engage in studies in the master's program of the graduate school for a minimum of two years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study before passing the viva and final examination of their master's thesis. Students who demonstrate excellent performance may complete the program before the end of the two-year term.
・Prior to completion, students of the Department of Mechanical Engineering are expected to

acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:

- Diverse knowledge and experience equipped with international awareness, and advanced basic academic competence.
- In-depth knowledge and competence in research in the fields of thermo-fluid dynamics, and the ability to pursue high-level specialist vocations.
- In-depth knowledge and competence in research in the fields of material physics, and the ability to pursue high-level specialist vocations.
- In-depth knowledge and competence in research in the fields of mechanical control, and the ability to pursue high-level specialist vocations.
- In-depth knowledge and competence in research in the fields of mechanical design and manufacturing, and the ability to pursue high-level specialist vocations.
- Outstanding advanced expertise in research and development as an engineer in the field of mechanical engineering equipped with the above specialized knowledge.

Department of Mechanical Engineering (Digital Medical Engineering Creation Course)

Based on the Kobe University Diploma Policy, the Department of Mechanical Engineering (Digital Medical Engineering Creation Course) of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies in the master's program of the graduate school for a minimum of two years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study before passing the viva and final examination of their master's thesis. Students who demonstrate excellent performance may complete the program before the end of the two-year term.
- Prior to completion, students of the Department of Mechanical Engineering (Digital Medical Engineering Creation Course) are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:
  - The ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering.
  - Diverse knowledge and experience equipped with international awareness, and advanced basic academic competence.
  - In-depth knowledge and competence in research in the fields of thermo-fluid dynamics, and the ability to pursue high-level specialist vocations.
  - In-depth knowledge and competence in research in the fields of material physics, and the ability to pursue high-level specialist vocations.
  - In-depth knowledge and competence in research in the fields of mechanical control, and the

ability to pursue high-level specialist vocations.

- In-depth knowledge and competence in research in the fields of mechanical design and manufacturing, and the ability to pursue high-level specialist vocations.
- Outstanding advanced expertise in research and development as a researcher in the field of mechanical engineering equipped with the above specialized knowledge.

Department of Chemical Science and Engineering

Based on the Kobe University Diploma Policy, the Department of Chemical Science and Engineering of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies within the graduate school for a minimum of two years, and meet the credit requirements necessary for their programs. Students who demonstrate excellent research may complete the program before the end of the two-year term.
- Under their supervisors' guidance, students must submit a master's thesis based on research that they have conducted, employing an advanced research methodology in the field of chemical science and engineering.
- Prior to completion, students of the Department of Chemical Science and Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:
  - Wide-ranging academic expertise in engineering and the ability to think from an international perspective.
  - In-depth academic knowledge and expertise in chemical science and engineering.
  - The ability to conduct advanced research by applying knowledge and expertise in chemical science and engineering to the discussion and resolution of social issues.

Department of Chemical Science and Engineering (Digital Medical Engineering Creation Course)

Based on the Kobe University Diploma Policy, the Department of Chemical Science and Engineering (Digital Medical Engineering Creation Course) of the Graduate School of Engineering, awards this academic degree in accordance with the policies described below.

- Students must engage in studies within the graduate school for a minimum of two years, and meet the credit requirements necessary for their programs. Students who demonstrate excellent research may complete the program before the end of the two-year term.
- Under their supervisors' guidance, students must submit a master's thesis based on research that they have conducted, employing an advanced research methodology in the field of chemical science and engineering.

・Prior to completion, students of the Department of Chemical Science and Engineering (Digital Medical Engineering Creation Course) are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:
  ・The ability to develop specialized knowledge and multifaceted thinking in cross-disciplinary fields for life/medical science and engineering.
  ・In-depth academic knowledge and expertise in the fields of chemical science and engineering.
  ・Competence in advanced research to discuss and address social challenges using the knowledge and expertise in chemical science and engineering as well as in health, welfare and medical engineering.

Doctoral Program

Department of Architecture

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Diploma Policy, the Department of Architecture of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

・Students must engage in studies within the graduate school for a minimum of three years, and meet the credit requirements necessary for their programs. Students who demonstrate excellent research may complete the program before the end of the three-year term.
・Under their supervisors' guidance, students must submit a doctoral dissertation based on research that they have conducted, employing an advanced research methodology in the field of architecture.
・Prior to completion, students of the Department of Architecture are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy::
  ・Highly advanced specialist knowledge of architecture and rich academic expertise, in addition to the ability to think from an interdisciplinary perspective.
  ・Outstanding advanced expertise in architecture and the in-depth academic knowledge of a researcher in this field.
  ・The ability to succeed as a self-reliant researcher based on expertise in architecture
  ・The ability to explore the social roles expected of architecture and to contribute towards scientific developments for the realization of a sustainable society

Degree: Doctor of Philosophy

Based on the Kobe University Diploma Policy, the Department of Architecture of the Graduate School of Engineering, awards this academic degree in accordance with the policies described below.

- Students must engage in studies within the graduate school for a minimum of three years, and meet the credit requirements necessary for their programs. Students who demonstrate excellence in research may complete the program before the end of the three-year term.
- Under their supervisors' guidance, students must submit a doctoral dissertation based on research that they have conducted, employing an advanced research methodology in the field of architecture.
- Prior to completion, students of the Department of Architecture are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy :
  - Highly advanced specialist knowledge of architecture as well as rich academic expertise and the ability to think from an interdisciplinary perspective
  - Outstanding and excellent advanced expertise in architecture and rich academic knowledge to be acquired as a researcher in this field.
  - The ability to succeed as a self-reliant researcher with architectural expertise in interdisciplinary fields.
  - The ability to explore the social roles expected of architecture and to contribute towards comprehensive academic developments for the realization of a sustainable society.

Department of Civil Engineering

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Diploma Policy, the Department of Civil Engineering of the Faculty of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies in the doctoral program of the graduate school for a minimum of three years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study with research guidance mainly given from an engineering perspective before passing the viva and final examination of their doctoral dissertation. However, students who demonstrate excellent performance may be allowed to complete their studies after the first year (for those who completed their Master's program in less than two years, the minimum period is three years including the time spent studying the Master's program).
- Prior to completion, students of the Department of Civil Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy :

・Advanced specialist competence.
・Advanced practical expertise backed by diverse interdisciplinary perspectives and specialist knowledge, which covers traditional civil engineering.
・Ability to address and solve unfamiliar problems.
・Ability to address problems in a comprehensive manner.

Degree: Doctor of Philosophy

Based on the Kobe University Diploma Policy, the Department of Civil Engineering of the Faculty of Engineering awards this academic degree in accordance with the policies described below.

・Students must engage in studies in the doctoral program of the graduate school for a minimum of three years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study with research guidance mainly given from the perspective of an interdisciplinary academic field) before passing the viva and final examination of their doctoral dissertation. However, students who demonstrate excellent performance may be allowed to complete their studies after the first year (for those who completed their Master's program in less than two years, the minimum period is three years including the time spent studying the Master's program).

・Prior to completion, students of the Department of Civil Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy:
・Advanced specialist competence.
・Advanced practical expertise backed by diverse interdisciplinary perspectives and specialist knowledge, which covers traditional civil engineering.
・Ability to address and solve unfamiliar problems.
・Ability to address problems in a comprehensive manner.

Department of Electrical and Electronic Engineering

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Diploma Policy, the Department of Electrical and Electronic Engineering of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

・Students must engage in studies within the graduate school for a minimum of three years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study with research guidance mainly given from an engineering perspective before passing the viva and final examination of their doctoral dissertation Students who

demonstrate excellence in research may complete the program before the end of the three-year term.

- Prior to completion, students of the Department of Electrical and Electronic Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy :
  - In-depth academic expertise and ability to think from an interdisciplinary perspective.
  - Advanced knowledge in relation to the fields of physical electronics or computer and information engineering and the ability to apply this knowledge.
  - Ability to identify challenges from a variety of perspectives, and address them through creative thinking.

Degree: Doctor of Philosophy

Based on the Kobe University Diploma Policy, the Department of Electrical and Electronic Engineering of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies within the graduate school for a minimum of three years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study with research guidance mainly given from the perspective of an interdisciplinary academic field before passing the viva and final examination of their doctoral dissertation. Students who demonstrate excellence in research may complete the program before the end of the two-year term.
- Prior to completion, students of the Department of Electrical and Electronic Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy :
  - In-depth academic expertise and the ability to think from an interdisciplinary perspective.
  - Advanced knowledge in relation to the fields of physical electronics or computer and information engineering and the ability to apply this knowledge.
  - Ability to identify challenges from a variety of perspectives, and address them through creative thinking.

Department of Mechanical Engineering

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Diploma Policy, the Department of Mechanical Engineering of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

・Students must engage in studies in the doctoral program of the graduate school for a minimum of three years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study with research guidance mainly given on an engineering perspective before passing the viva and final examination of their doctoral dissertation. Students who demonstrate excellence in research may complete the program before the end of the three-year term.

・Prior to completion, students of the Department of Mechanical Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy :

・Advanced competence in research based on rich knowledge of the fields of thermo-fluid dynamics

・Advanced competence in research based on rich knowledge of the fields of material physics

・Advanced competence in research based on rich knowledge of the fields of mechanical control

・Advanced competence in research based on rich knowledge of the fields of mechanical design and manufacturing

・Advanced competence in research enabling them to handle diverse study areas as a self-reliant researcher

Degree: Doctor of Philosophy

Based on the Kobe University Diploma Policy, the Department of Mechanical Engineering of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

・Students must engage in studies in the doctoral program of the graduate school for a minimum of three years, during which they must satisfy the minimum credit requirement and undertake the necessary independent study with research guidance mainly based on the perspective of an interdisciplinary academic field before passing the viva and final examination of their doctoral dissertation. Students who demonstrate excellence in research may complete the program before the end of the three-year term.

・Prior to completion, students of the Department of Mechanical Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy :

・Advanced competence in research based on rich knowledge of the fields of thermo-fluid dynamics.

・Advanced competence in research based on rich knowledge of the fields of material physics.

・Advanced competence in research based on rich knowledge of the fields of mechanical

control.

- Advanced competence in research based on rich knowledge of the fields of mechanical design and manufacturing.
- Advanced competence in research enabling them to handle diverse study areas as a self-reliant researcher.

Department of Chemical Science and Engineering

Degree: Doctor of Philosophy in Engineering

Based on the Kobe University Diploma Policy, the Department of Chemical Science and Engineering of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies within the graduate school for a minimum of three years, and meet the credit requirements necessary for their programs. Students who demonstrate excellence in research may complete the program before the end of the two-year term.
- Students must submit a doctoral dissertation based on research that they conducted, employing an advanced research methodology in the field of chemical science and engineering with their supervisors' guidance.
- Prior to completion, students of the Department of Chemical Science and Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy :
  - Rich, in-depth academic knowledge of engineering and the ability to think from an international perspective.
  - In-depth academic knowledge and advanced expertise in chemical science and engineering.
  - The ability to conduct research by applying academic knowledge and expertise in chemical science and engineering to the identification and resolution of social issues.
  - The ability to succeed as a self-reliant researcher in engineering based on their expertise in chemical science and engineering.

Degree: Doctor of Philosophy

Based on the Kobe University Diploma Policy, the Department of Chemical Science and Engineering of the Graduate School of Engineering awards this academic degree in accordance with the policies described below.

- Students must engage in studies within the graduate school for a minimum of three years, and meet the credit requirements necessary for their programs. Students who demonstrate excellence in research may complete the program before the end of the two-year term.

・Students must submit a doctoral dissertation based on the research which is conducted by them, employing an advanced research methodology in the field of chemical science and engineering with their supervisors' guidance.
・Prior to completion, students of the Department of Chemical Science and Engineering are expected to acquire the following skills in addition to the abilities set out in the Kobe University Diploma Policy :
  ・Rich, in-depth academic knowledge of engineering and the ability to think from an international perspective
  ・In-depth academic knowledge and advanced expertise in chemical science and engineering.
  ・Excellent competence in research enabling them to identify and address social challenges using their knowledge and expertise in chemical science and engineering
  ・The ability to succeed as a self-reliant researcher in interdisciplinary fields based on their expertise in chemical science and engineering. ・Excellent competence in research enabling them to identify and address social challenges using their knowledge and expertise in chemical science and engineering
  ・The ability to succeed as a self-reliant researcher in interdisciplinary fields based on their expertise in chemical science and engineering.