



The Graduate School of Marine Science and Technology, Tokyo  
University of Marine Science and Technology

“Development of WISE Program (World-leading Innovative &  
Smart Education) Program to foster AI(Artificial Intelligence)  
Professionals for Marine Industries”

Application information for the October 2023 period

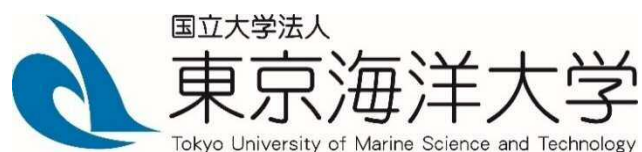
and

Application information for the April 2024 period

**【Doctoral program】**

(For “students admitted through the special admission for full-time employees”)

June 2023



## CONTENTS

- 1 Application Schedule
  
- 2 Overview of the Program
  
- 3 Number of applicants and qualifications
- 4 Application method
- 5 Selection criteria
- 6 Briefing session for students
- 7 Announcement of successful applicants
- 8 Procedures for participating in the Program
  
- 9 Curriculum and requirements for completion of the Program
- 10 Supports for students
- 11 Marine Industry AI Professional Faculty
- 12 Handling of personal information
- 13 About security export control
  
- 14 Document submission destination

## 1 Application Schedule

- ※ Applications for Schedule B will be accepted only from those who are unable to apply for Schedule A due to special reasons (such as boarding for classes). Those who fail the Schedule A cannot apply.

### For the October 2023 period

	Schedule A	Schedule B
(Only Schedule B) Prior Contact Period		June 5 - August 21, 2023
Application period	August 9 - 21, 2023	October 5 - 12, 2023
Announcement of the result of the first screening	August 25, 2023	October 18, 2023
Date of the second screening	August 29 and 30, 2023	October 20 and 23, 2023
Announcement of successful applicants	September 5, 2023	October 30, 2023

### For the April 2024 period

	Schedule A	Prior Contact Period
(Only Schedule B) Prior Contact Period		June 5, 2023 - January 19, 2024
Application period	January 12 - 19, 2024	April 3 - 10, 2024
Announcement of the result of the first screening	January 25, 2024	April 15, 2024
Date of the second screening	January 29 - 31, 2024	April 18 and 19 2024
Announcement of successful applicants	February 16, 2024	April 30, 2024

Development of WISE Program (World-leading Innovative & Smart Education) Program to foster AI(Artificial Intelligence) Professionals for Marine Industries (“the Program”) recruits program students (master's program at our university).

## 2 Overview of the Program

In modern society, the marine industry workforce is expected to decrease. Development of WISE Program (World-leading Innovative & Smart Education) Program to foster AI(Artificial Intelligence) Professionals for Marine Industries develops researchers who will lead diverse fields in domestic and international research communities as well as in other countries. As such, we build innovative systems, create diverse values, and re-establish the international presence of Japan in the global marine industry. The Program is established as an educational program for an integrated graduate school course where all activities, including coursework, thesis writing, and evaluation of the written thesis, help students earn a degree in an organic and synergic manner.

We are soliciting proposals from students who understand the Program’s vision and would like to participate in the program.

### Diploma policy

#### ① Characteristics of personnel in the Program

Innovators, advanced professional engineers, and marine policymakers with technical literacy in big data analysis and machine learning capable of evaluating AI performance accurately and leading the social implementation of AI based on expertise and extensive field experience learned at TUMSAT.

#### ② Skills and qualities to be learned by students

In addition to the diploma policy of each graduate school, the Program’s students acquire the following skills and qualities:

- Knowledge and skills in the data science fields, including big data analysis and machine learning, to perform social implementation of AI
- Clear understanding of issues in their own areas of expertise that may be resolved with data science (big data and machine learning) and the ability to plan, propose, and implement technologies to solve such issues
- Ability to develop, verify, and analyze the results of research projects that scientifically evaluate efficacy and validity of application cases of big data and machine learning towards social implementation of AI
- Competent decision-making and communication skills to disseminate results of big data analysis and machine learning with the public (for students in the fields of resource assessment and management)
- Accurately interpret results of big data analysis and machine learning in a scientific manner and make full use of the results (for students in the field of marine observation)

### 3 Number of applicants and qualifications

#### For the October 2023 period

	Schedule A	Schedule B
Doctoral Program 2023 enrollment	About 5 peoples	Some people

#### Qualification requirements

Satisfy the following ① or ② and ③ ~ ⑥.

- ① Those who are scheduled to enroll in the first year of the doctoral program at our graduate school in October 2023.  
※ If you have applied for the selection of students for the master's program at our university, you can apply even before the announcement of the results.
- ② Those who are enrolled in the first year of the doctoral program at our graduate school in April 2023.
- ③ To be a "The special admission for full-time employees".
- ④ Have a track record of working for more than 2 years as regular employment at a company, etc.
- ⑤ Have research results or specialized level knowledge related to AI / data science.
- ⑥ Those who are willing to complete the doctoral program in 3 years and have goals that match the educational and research principles of this program.

#### For the April 2024 period

	Schedule A	Schedule B
Doctoral Program 2024 enrollment	About 5 peoples	Some people
Doctoral Program 2023 enrollment	Some people	

#### Qualification requirements

Satisfy the following ① or ② or ③ and ④ ~ ⑦.

- ① Those who are scheduled to enroll in the first year of the doctoral program at our graduate school in April 2024.  
※ If you have applied for the selection of students for the master's program at our university, you can apply even before the announcement of the results.
- ② Those who are enrolled in the first year of the doctoral program at our graduate school in October 2023.
- ③ Those who are enrolled in the first year of the doctoral program at our graduate school in April 1 2023.
- ④ To be a "The special admission for full-time employees".

- ⑤ Have a track record of working for more than 2 years as regular employment at a company, etc.
- ⑥ Have research results or specialized level knowledge related to AI / data science.
- ⑦ Those who are willing to complete the doctoral program in 3 years and have goals that match the educational and research principles of this program.

#### 4 Application method

Please submit 1-4 documents within the applicable period.

As a general rule, application documents should be submitted by email.

[Address for the submission] [marine-ai\\_office@o.kaiyodai.ac.jp](mailto:marine-ai_office@o.kaiyodai.ac.jp)

- 1) Application form of the Program
  - 2) Research plan (The dedicated form is attached to this document. The plan must include the motivation for applying for this program, content related to AI or big data, and future plans after completing this program and obtaining a degree).
  - 3) Transcript of the final school (submitted in the doctoral program entrance examination)
  - 4) Recommendation letter from the faculty member who will be accepted
- \* No examination fee is required to apply to the Program.
  - \* If the applicant studied at any School (master's course) of TUMSAT, a certificate of academic results is not required. Instead, the applicant must include the student number given at the School in the application.
  - \* Prior to submitting an application and research plan, the applicant must obtain approval of the main academic advisor.

#### 5 Selection criteria

##### (1) First selection: document screening

Screening will be conducted based on Transcript of the final school, motivation for the application, and research plan in a comprehensive manner.

\* Please note that the submitted documents may not be changed and will not be returned.

##### (2) Second selection: interview screening

The interview screening includes a presentation regarding the contents of the submitted research plan (10 minutes) and a subsequent question and answer session (total 20 minutes). The sessions evaluate applicants in a comprehensive manner based on their academic abilities, research skills, and understanding about and motivation for the Program.

\* Interviews will be conducted online using Cisco Webex.

## 6 Briefing session for students

On the start date of each application period, Cisco Webex will be conducted an online briefing session.

- ① July 10, 2023 from 10:30 to 11:30
- ② December 11, 2023 from 10:30 to 11:30

## 7 Announcement of successful applicants

Successful applicants will be announced on the Program website (<https://www.g2.kaiyodai.ac.jp/marine-ai/>).

Successful applicants will be also notified individually.

## 8 Procedures for participating in the Program

The Program's administration personnel will notify successful applicants of the procedures to participate in the Program.

No additional fee is needed for entry or study in the Program.

## 9 Curriculum and requirements for completion of the Program

In addition to completing the coursework of the Graduate School to which the student belongs, all students who study in the Program must take subjects that are offered by the Program and earn credits as shown below. Students must pass Qualifying Examination and the Program's completion review provided by Quality Assurance Unit ("QAU").

Students who complete the Program earn doctor's degree of Marine Science or doctor's degree of Engineering. They also receive a certificate of degree with a note stating that they have completed the Development of WISE Program (World-leading Innovative & Smart Education) Program to foster AI (Artificial Intelligence) Professionals for Marine Industries.

\*About the Program completion review

The Program completion review will be conducted by QAU during the third year of the doctoral course.

### Doctoral course completion requirements

	Classification	Subject title	Required credits
Required	" WISE Program" Common subjects ※1		
	AI (machine learning)	Advanced Artificial Intelligence and Machine Learning (2)	4
	Big data	Social Implementation of Data Science (2)	
	Collaboration with different fields	Marine AI Workshop II	1
Elective	"WISE Program" in each major Designated subject ※2	" WISE Program" designated subjects in each major	2

	Courses ※3		
	Course on Advanced Reliability Assessments	Advanced Evaluation of Ship Navigation Safety (2)	2
	Course on Social Implementation Impact Assessments	Interlaboratory Seminar in Social Implementation (2)	
Required	Marine AI Residency Program		2
	Advanced Seminar		2
	Research of specialization		4
Total			17

\* 1 Each subject will be established as a Graduate School Common Subjects.

\* 2 Each subject is designated in each major.

\* 3 Select either one when entering the second semester program.

## 10 Supports for students

Students who participate in the Program may receive support for travel expenses for overseas training opportunities offered by the Program. Expenses for implementing the Program may also be supported. Please consult with the Academic Affairs Division in charge of the WISE Program for the details of available supports. In addition to the above supports, the Marine AI Consortium, which is an industry-academia-government collaboration, provides different support opportunities, including 1) matching needs and interests between students studying in the Program and private companies, 2) in-residence projects, where students work in actual projects at partner institutes. In-residence projects will be offered to doctoral course students.

Furthermore, to allow students participating in the Program to concentrate on their studies, financial support for education/research expenses will be provided for students selected by the QAU among those who achieve excellent results in the screening contest.

## 11 Marine Industry AI Professional Faculty

The program provided training for faculty members with the aim of further utilizing AI in research and certified the completion of AI training.

Please use it as a reference when deciding on an academic advisor.

<https://www.g2.kaiyodai.ac.jp/marine-ai/students/>

## 12 Handling of personal information

Personal information that is provided in the application documents, including supporting documents and those provided by the Course to which the applicant belongs, will be used to select successful students who will participate in the Program and to prepare for acceptance, education, and research guidance of



successful students.

### **13 About security export control**

TUMSAT thoroughly vets international students when accepting them. The examination is conducted pursuant to the Rules for Security Export Control at the Tokyo University of Marine Science and Technology, which is established according to the Foreign Exchange and Foreign Trade Act of Japan.

### **14 Document submission destination**

WISE Program Promotion Support Office [Academic affairs division]

2-1-6 Etchujima, Koto-ku, Tokyo, 135-8533

Phone: 03-5245-7660

Email: [marine-ai\\_office@o.kaiyodai.ac.jp](mailto:marine-ai_office@o.kaiyodai.ac.jp)

HP : <https://www.g2.kaiyodai.ac.jp/marine-ai/>