

Course Title	Marine AI Practice in English		
Department/Course	Graduate School of Marine Science and Technology Master's Course		
Category/Specializations	<Graduate School Subjects>, <Other Courses' Subjects>		
Year Offered	1st	Class	10
Required or Elective	elective	Credit	2
Semester	Second Semester	Course Type	
Day/Period	INTENSIVE	Lecture Room	
Chief Instructor	Takenawa Tomoyuki		
Instructors	Takenawa Tomoyuki		
Theme & Objects	The goal is to acquire the scientific knowledge of data science and AI at a level necessary for social implementation and the skills to make appropriate decisions and disseminate information. Students will practice on their own issues in data science and AI.		
Learning Outcomes	Acquire scientific knowledge of data science and AI at a level necessary for social implementation, and be able to make appropriate decisions and disseminate information.		
Styles of Class	Offered in the second quarter. A combination of in-person and remote (real-time/on-demand) sessions. Scheduled to be held four times at the Etchujima Campus and three times at the Shinagawa Campus. Presentations will generally be conducted in person.		
Course Contents	<p>(1) Set an assignment for each student regarding implementation of data science and AI (2) Visit to laboratory seminar [AL learning experience] (3) Presentation and discussion of research to implement assignments: 2 students per session [AL discussion] (4) Presentation and discussion of implementation of assignments (1st time): 2 students per session [AL presentation] (5) Follow-up to (4) [AL problem solving]</p> <p>Note: Depending on the number of students enrolled, (4) and (5) may be conducted more than once. Note: If an appropriate individual assignment cannot be set, general object detection or time series analysis will be assigned.</p> <p>Note: [AL] denotes Active Learning.</p>		
Prerequisites	In principle, international students who will enroll in the Master's Program in the Marine AI and Data Science Degree Program in the academic year 2024 or later. Have basic knowledge of machine learning and deep learning.		
Textbook / References	May use Udemy.		
Preparation & Review	Each student should study and implement his/her own assignments.		
Assessment and Examinations	Class participation (participation in discussions): 30%. Presentation on implementation of the assignment: 70%.		
Evaluation Criteria	The task is set appropriately, and able to explain what he/she has done about it.		
Teaching activities & methods			
Instructor Contact Information	takenawa@kaiyodai.ac.jp		
Other Information	The course is scheduled from October to January of the following year, assuming enrollment in M2 as of October.		
URL			
Code			
Teaching Language	English		
Workload Calculation	<p>(1) Class hours: 30 hours (2) Laboratory activities: hours (3) Preparation: 20 hours (4) Review: 20 hours (5) Presentation preparation: 20 hours (6) Examination preparation (including report writing): hours (7) Discussions with faculty: hours (8) Participation in related seminars: hours (9) Other laboratory activities: hours (10) Total hours of study: 90 hours</p>		
Related Degree Awarding Policy	To have the scientific knowledge and skills in data science, such as data analysis and machine learning, necessary for social implementation. To be able to make appropriate decisions and disseminate information based on the results of data analysis and machine learning.		
Relation to SDGs	9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development		