

Course Title	Advanced Evaluation of Ship Navigation Safety		
Department/Course	Graduate School of Marine Science and Technology Doctoral Course		
Category/Specializations	<Graduate School Subjects>		
Year Offered	1st	Class	10
Required or Elective	elective	Credit	2
Semester	First Semester	Course Type	
Day/Period	INTENSIVE	Lecture Room	
Chief Instructor	Uchino Akiko		
Instructors	Uchino Akiko		
Theme & Objectives	<p>Applying Artificial Intelligence (AI) to device development in systems is intended to enable AI to replace humans in information processing that humans have fulfilled, and to achieve functions equivalent to those achieved by humans. Although AI is capable to achieve some functions better than humans, the minimum-required level of functions in order to replace humans is to achieve all the functions humans achieve. Therefore, in order to reach the stage of practical application, it is essential to assess whether the AI device in question is capable to fulfill functions with equivalent level humans have achieved and whether to achieve the required functions by environmental conditions. In the ship-handling field, there are a wide range of functions that humans have fulfilled. Furthermore, the achieved degree of these functions determines the success or failure of safe navigation. Due to such importance of studying seafarers' competence in ship navigation, our university has developed methods for assessing ship navigation safety based on functional analyzing the long-term accumulation of seafarers' behavioural data.</p> <p>The aim of this lecture course is to learn the above-mentioned issues relating to assessing seafarers' competence and its navigational safety, and to be able to apply them to the capability evaluation of AI devices. With this in mind, after learning the theory and methods to evaluate the consistency of AI by qualitatively and quantitatively estimating workloads that vary depending on navigation environmental conditions, each student will apply these issues to each proposed system and consider it.</p>		
Evaluation Method	Evaluation will be based on classroom activity and assignments.		
Other Information	<ul style="list-style-type: none"> <li>- If you wish to take this class, in advance, please contact me via email (uchino@kaiyodai.ac.jp) .</li> <li>- In principle, lectures are conducted in-person.</li> </ul>		
Relation to SDGs	3 Good health and well-being 9 Industry, innovation and infrastructure 12 Responsible consumption and production		