

Subject	Introduction to Fisheries Science (水産科学概論)	Day/Period	Fri./2nd	Object	AMB/JYPE
Instructor (Post)	M. Osada et al. (Prof.)	Categories	Specialized Subjects	Preferable Participants	2nd-year & JYPE students
Position	Faculty of Agriculture (Graduate School of Agricultural Science)			Credits	2
				Semester	4
Subject Numbering	ABS-APS255E			Language Used in Course	English
1. Class subject Introduction to Fisheries Science					
2. Object and summary of class This course provides an overview of the fishery science. Students will learn the fishery science on the basis of marine biology in a broad sense from molecules to ecosystems.					
3. Keywords Fisheries science, basics & outlines					
4. Goal of study The goal is to understand the fishery science basically from ecology, physiology, genetics, molecular biology and evolution, and to appreciate the fishery science as the applied marine biology.					
5. Contents and progress schedule of class Topics on marine ecology and oceanography 1. Oct. 1 "The ecology of floating seaweeds" (M. Aoki) 2. Oct. 8 "Distributional pattern of seaweeds" (H. Suzuki) 3. Oct. 15 "How to know the fish age" (S. Katayama) 4. Oct. 22 "How to know the fish migration" (S. Katayama) 5. Oct. 29 "Benthos adapted to marine environments" (W. Sato-Okoshi) 6. Nov. 12 "Plankton in the ocean" (G. Nishitani) 7. Nov. 19 "Coastal ecosystem dynamics and fisheries resources" (T. Fujii) Topics on physiology, biochemistry and genetics of aquatic organisms 8. Nov. 26 "Immunity in marine invertebrates" (K. Takahashi) 9. Dec. 3 "Manipulation of reproduction in bivalve mollusks" (M. Osada) 10. Dec. 10 "Food chemistry of fish and shellfish" (Y. Ochiai) 11. Dec. 17 "Probiotics and bioactive substances in fish" (T. Nakano) 12. Dec. 24 "Genetic conservation and sustainable use of resources in aquatic organisms" (M. Nakajima) 13. Jan. 7 "Biological sequence comparison methods" (Y. Sakai) 14. Jan. 21 "Evolution and fisheries resources" (M. Ikeda) 15. Jan. 28 "Molecular phylogenetics: Tools and applications" (C. Ames)					
6. Preparation Refer to the recent topics in each field.					
7. Record end evaluation method Attendance and paper. Papers in which the contents of each lecture are organized should be directly submitted to the "Classroom" by the next lecture. The final report should be submitted by a week after the final lecture.					
8. Textbook and references No textbook. Reference books will be introduced.					
9. Self study Summarize the content of each class promptly.					
10. Practical business					
11. In addition Questions, comments, and requests accepted. Send them to the representative instructor, Prof. Osada: makoto.osada.a8@tohoku.ac.jp					