

Elective Course Description (1. Fall Semester)

Subject (English)	Aquatic Plant Ecology		Semester	Fall	Day/Slot	
科目名 (日本語)	水圏植物生態学					
Course Code		Course Numbering	ABS-APS343E		Period	Oct. – Feb.
Instructor (Post)	TBC				Campus	
					Building	
Faculty	Faculty of Agriculture		Credits	2	Class Room	
Class subject	Interaction between herbivores and marine plants in coastal rocky bottoms					
Object and summary of class						
<p>This course provides reproduction, grazing activity, population dynamics of herbivores associated with marine forest. Students will learn marine forestation, and management and enhancement means of sea urchin and abalone stocks associated with their ecological characteristics.</p>						
Keywords	Kelp forest, Sea urchin, Barren, Grazing, Population dynamics, Production, Rocky subtidal ecosystem, Global warming					
Goal of study						
<p>The goal is to understand how sea urchin and abalone maintain their population associated with seaweed beds and how enhancement means of seaweed, sea urchin and abalone were developed on the basis of biological and ecological knowledge.</p>						
Contents and progress schedule of class						
<ol style="list-style-type: none"> 1. Structure and function of marine forest. 2. Reproduction of herbivore 3. Growth and gonad production of herbivore. 4. Grazing activity 5. Chemical defense of seaweeds. 6. Mechanisms of population maintenance and fluctuation 7. Effects of sea urchin grazing on rocky subtidal communities. 8. Restoration of “barren” 9. Effect of ocean warming and acidification on rocky subtidal communities 10. Development of enhancement means of sea urchin and abalone 						
Preparation	-					
Record and evaluation method	Examination, report and attendance					
Textbook and references	<p>Reference texts:</p> <ul style="list-style-type: none"> - Lawrence JM (2013) Sea urchins: biology and ecology. Elsevier. - Schiel DR and Foster MS (2015) The biology and ecology of giant kelp forests. University of California Press 					
Self study	Review is required.					
In addition	-					