

Course Title	Advanced Animal Breeding		
Instructor	Takeshi OHKUBO, Hidenori MORI		
Code	MA051000	Semester	2nd (Oct-)
Credit(s)	1	Day/Period	Tue, 3
Description Code	A-ALS-632		
Outline	Growth and reproduction are critically and complexically controlled by hormone. The hormone action is exhibited by binding hormone with its specific receptor in target cell followed by signal transduction. This course focuses on genetic control of reproduction in domestic animal as well as animal physiology and cell biology for better understanding animal breeding processes.		
Keywords	hormone, reproduction, sex determination, signal transduction		
Goals	The goal of this class is to sharpen the obtained knowledge in this lecture to develop research ideas to improve animal production by reproductive control.		
Course Plan	1) Course guidance, and Endocrine control in reproduction: an overview (Ohkubo) 2) Sex determination and differentiation 1 (Mori) 3) Sex determination and differentiation 2 (Mori) 4) Hypothalamo-pituitary-gonadal axis 1 (Ohkubo) 5) Hypothalamo-pituitary-gonadal axis 2 (Ohkubo) 6) Signal transduction 1 (Ohkubo) 7) Signal transduction 2 (Ohkubo) 8) General discussion in genetic control of reproduction (Ohkubo) Diploma Policy: Academic and research skills in the specialized field		
Advice for Preview and Review	Point and issue of each section will be explained on the lecture. Look back the lecture using handouts supplied in the class as well as recommended books and/ or related Web pages.		
Prerequisite	Students are required to have basic knowledge on animal reproduction and cell biology. Be participating actively in class, and discussing about scientific topics with others. Office hour: T. Ohkubo, 12:00-13:00 on Wed.; H. Mori, 12:00-12:30 from Thu. to Fri.		
Grading Criteria	Discussion and debate during the class (20 %) Report for specific topic (80 %)		
Texts/References	Specific textbook will not be used in this course. Materials (academic papers etc) will be handed out during the class. Several books will be introduced in the class for better understanding animal breeding and reproduction.		