DRB601 "Fertilization and Early Development" - Fall 2024

Course Director: Yusuke Marikawa, PhD (marikawa@hawaii.edu) Tel: 692-1411

Instructors: Dr. Vernadeth B. Alarcon, Dr. Benjamin Fogelgren,
Dr. Yusuke Marikawa, Dr. Monika Ward,
Dr. Steve Ward, Dr. Yukiko Yamazaki, Dr. Masato Yoshizawa

Schedule: August 26 ~ December 16, every Monday (see Table below)
3:30pm ~ 5:30pm
Location: (**K**) Kakako JABSOM Biosciences Building (BSB), 222N
(**M**) Manoa IBR Conference Room, E125

Date	Topic	Lecturer	Location
August 26	Introduction and Overview	Dr. Yusuke Marikawa	**K**
September 2	*No class (Labor Day Holiday)*		
September 9	Gametes and Fertilization	Dr. Monika Ward	**M**
September 16	Preimplantation Development	Dr. Vernadeth Alarcon	**K**
September 23	Embryonic Body Patterning	Dr. Yusuke Marikawa	**K**
September 30	Stem Cells in Development	Dr. Yusuke Marikawa	**K**
October 7	Chromatin Structure and Development	Dr. Steve Ward	**M**
October 14	MIDTERM EXAM		**K**
October 21	Development of Renal System	Dr. Benjamin Fogelgren	**K**
October 28	Development of Reproductive System	Dr. Yusuke Marikawa	**K**
November 4	Evolutionary Developmental Biology	Dr. Masato Yoshizawa	**M**
November 11	*No class (Veterans Day Holiday)*		
November 18	Germ Cell Development	Dr. Yukiko Yamazaki	**K**
November 25	Assisted Reproductive Technologies	Dr. Monika Ward	**M**
December 2	Cloning and Nuclear Reprogramming	Dr. Yukiko Yamazaki	**K**
December 9	Developmental Biology and Bioethics	Dr. Yusuke Marikawa	**K**
December 16	FINAL EXAM		**K**

(May 22, 2024)

Course Objectives: The overall objective of this course is to understand the molecular and anatomical fundamentals of early developmental biology. This course will have an underlying evolutionary biology approach with the goal of having a deeper understanding of developmental biology, which has significant impact on reproductive and regenerative medicine. The specific goals are:

1. to learn a series of critical events that take place during fertilization and embryo development
2. to understand the genetic, molecular and cellular basis of the mechanisms that regulate those critical events
3. learn how such important knowledge is obtained from studies using non-human model organisms
4. to learn how the recent advancement in genomic and reproductive technology has yielded new diagnostic methods, surgical procedures, and embryo manipulation tools

Grading criteria: Your grade will be determined based on the following three criteria:

1. Attendance - Basically, you need to attend every single lecture from the start (3:30pm) to the end.

2. Participation - This includes "actively asking questions to lecturers" and also "responding to lecturers".

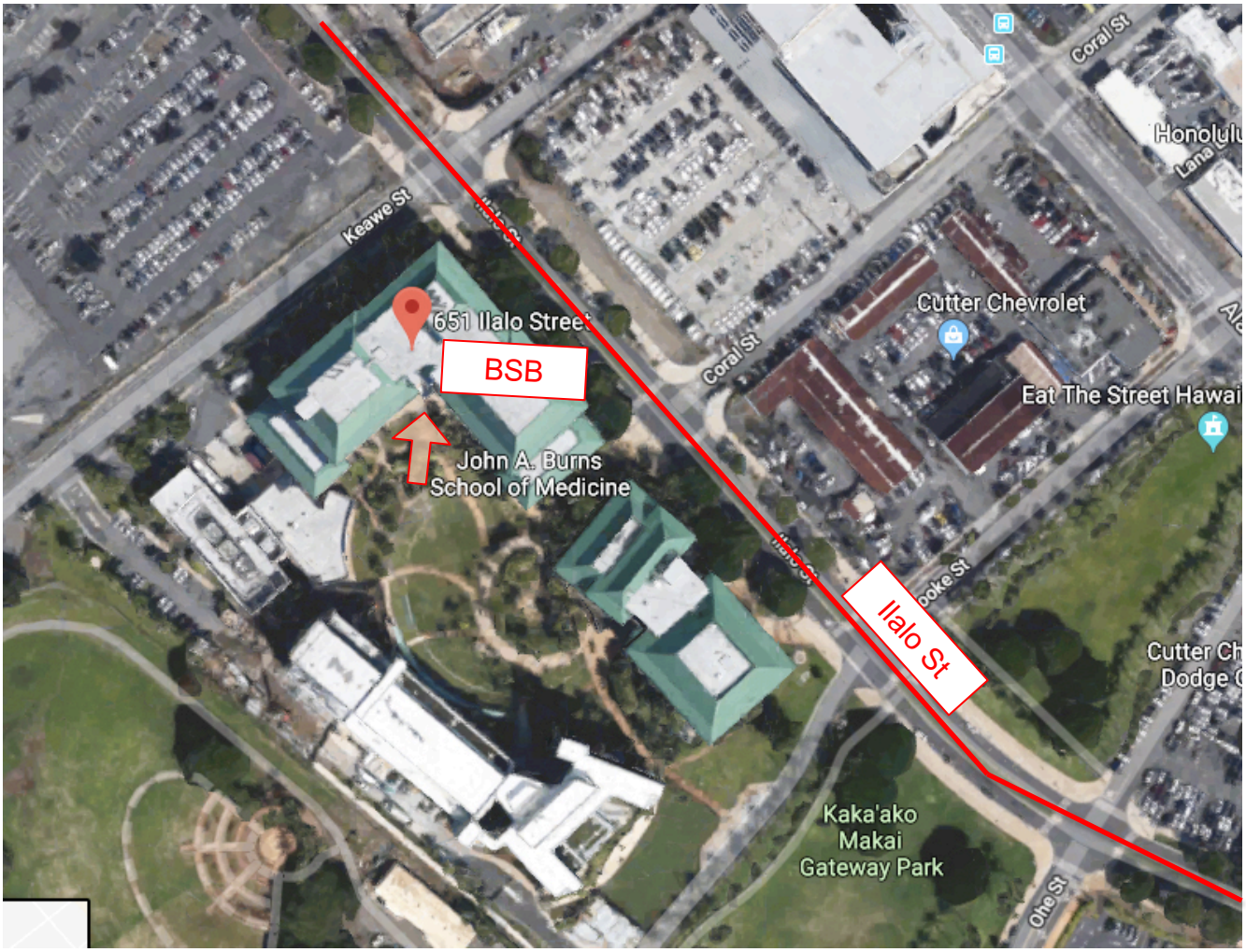
3. Written exams - There are two exams (midterm and final). Both are equally important. The format of exams may vary depending on lecturers (multiple choice or essay). They will be based on lecture materials.

Suggested Text: Developmental Biology, by Scott F. Gilbert (Sinauer Associates)

This is just a suggestion (not requirement), but it's a good suggestion. You can learn a lot of interesting and cool stuff from this book, which may not be covered by the lectures.

Maps of the classrooms are on the next pages:

Kakako JABSOM Biosciences Building (BSB), 222N
651 Ilalo Street, Honolulu, HI96813



Manoa IBR Conference Room, E125
1960 East-West Road, Honolulu, HI96822