

ANAT607 Human Embryology - Summer 2013

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

Instructors: Dr. Yusuke Marikawa, Dr. Keith Fong,
Dr. Vernadeth B. Alarcon

Credit: 2 credits

Schedule: May 30th to July 3rd
Tuesday & Wednesday (lecture), 1 pm - 3pm, BSB Room 222P
Thursday (lab), 1 pm - 3pm (+ extra), BSB Room167

Course objectives: Human Embryology is a lecture/lab course designed to develop an understanding of the essential aspects of human embryogenesis, and that many congenital malformations and birth defects arise from the misregulation of specific embryological events. The primary objectives are:

- (1) to learn a series of critical events that take place during embryo development to create the structurally and functionally intact human body
- (2) to understand the genetic, molecular and cellular basis of the mechanisms that regulate those critical embryological events, and learn how such important knowledge is obtained from studies using non-human model organisms
- (3) to learn how the recent advancement in genomic and reproductive technology has yielded new diagnostic methods, surgical procedures, and embryo manipulation tools
- (4) to discuss how such advancement has resulted in various issues that are of bioethical concerns

Recommended textbook: Langman's Medical Embryology, 12th Edition, by T. W. Sadler

Evaluation and grading

- Written exams (mid-term and final) on lecture materials
- Attendance and participation in discussion
- Lab assessment will be based on demonstration of skills and final report

Schedule (as of April 27, 2013; subject to further change)

Lectures (BSB 222P)

May 30 th (Thr)	Introduction
	Overview of human embryology
June 4 th (Tue)	Gametes and fertilization
	Placenta development
June 5 th (Wed)	Germ layer formation
	Construction of body architecture
June 11 th (Tue)	Heart development
	Lung development
June 12 th (Wed)	Development of GI system and associated organs
	Demonstration of plastinated human fetus by Dr. Alarcon
June 18 th (Tue)	<u>Mid-term exam</u>
June 19 th (Wed)	Development of central nervous system
	Neural crest development
June 25 th (Tue)	Muscle and bone development
	Development of head and neck
June 26 th (Wed)	Kidney development
	Sex differentiation
July 2 nd (Tue)	<u>Final exam</u>
July 3 rd (Sat)	(Lab report deadline)

Embryology Laboratory

Every Thursday

(ANAT607 Laboratory; detailed schedule to be announced separately)