



UNSW

THE UNIVERSITY OF NEW SOUTH WALES

SCHOOL OF MEDICAL SCIENCES

ANAT2341

Embryology: Early and Systematic Development 2012



Dr Mark Hill
(Course coordinator)

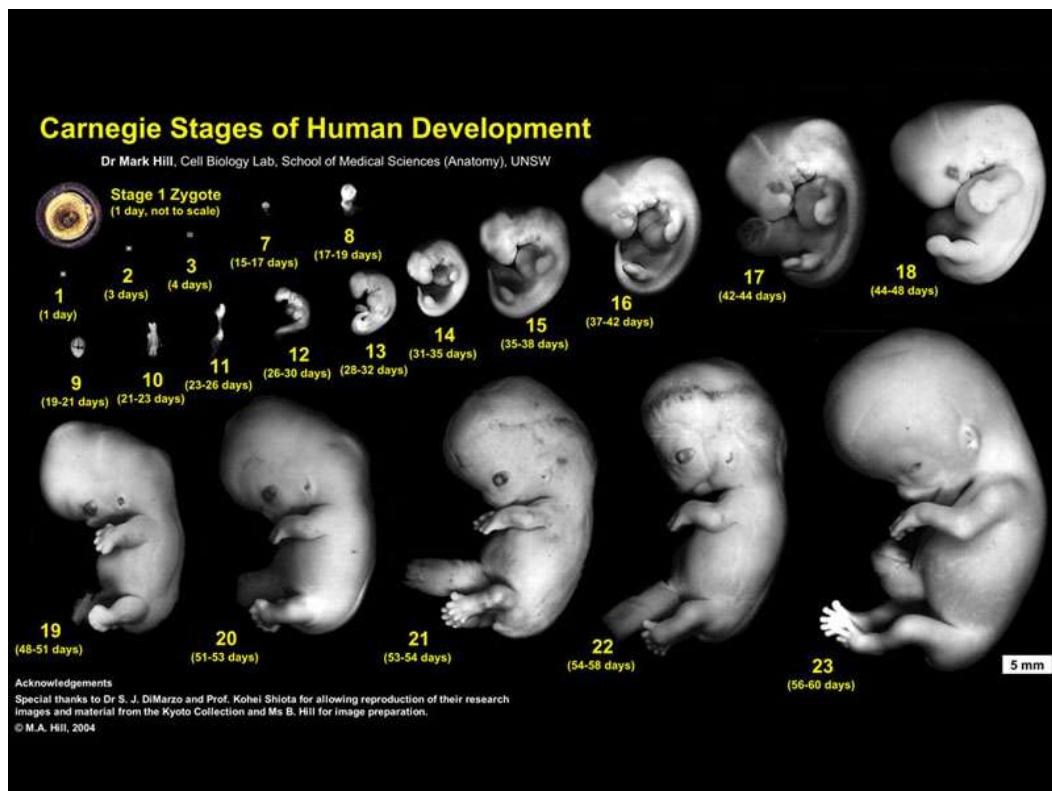


Figure showing the first 8 weeks of human embryological development.



UNSW Course Outline

1. Location of the course

School of Medical Sciences, Embryology: Early and Systematic, ANAT2341, S2, 2012

2. Table of Contents

Page 2 - course location, table of contents, staff contact details, course details

Page 3 - Rationale for the inclusion of content and teaching approach, teaching strategies, assessment

Page 4 - Academic honesty and plagiarism, course schedule

Page 5 - Expected resources for students, course evaluation and development, health and safety, student equity and diversity

Page 6 - Student laboratory risk assessment

3. Staff Contact Details

Position	Name	Email	Availability; times and location
Course Convener	Dr Mark Hill	m.hill@unsw.edu.au	Mon 2-3, Wed 2-3; WW room G20
Lecturer/tutor	Dr Steve Palmer	s.palmer@unsw.edu.au	By appointment
Lecturer/tutor	Prof Ken Ashwell	k.ashwell@unsw.edu.au	By appointment
Lecturer/tutor	A/Prof Sally Dunwoodie	s.dunwoodie@victorchang.edu.au	By appointment

4. Course details

Credit Points:

6

Summary of the Course

This course will introduce embryological development as a major topic within medical sciences. Students completing this course will have a broad understanding of: human development, some animal models of development and current related research topics. Experts and researchers from within the field contribute to the current course.

Aims of the Course

1. This course will enable students to explore and gain further understanding of embryology through the investigation of development in both humans and animal models with a direct emphasis of their application to emerging research and reproductive technologies.
2. This course will enable students to broadly understand abnormalities in development and current applications to medical research.

Student learning outcomes

At the conclusion of this course the student will be able to:

1. Describe the key events in early and systematic embryological development.
2. Apply developmental theory to abnormalities of development and current medical research techniques.
3. Complete tasks in scientific communication either online, written and by oral presentation.
4. Work in small research groups and carry out peer assessment by completing an online group project.

Graduate Attributes

The students will be encouraged to develop the following Graduate Attributes by undertaking the selected activities and knowledge content. These attributes will be assessed within the prescribed assessment tasks.

At the conclusion of this course the student will be able to:

1. Investigate embryological development by scholarly enquiry of research literature.
2. Apply developmental theory to anatomical development.
3. Undertake basic research by applying analytical and critical thinking.
4. Create online individual and group projects that demonstrate initiative and collaborative work.

5. Rationale for the inclusion of content and teaching approach

This course includes content to enable students to develop communications skills and practices that will enhance their development as a medical researcher. It reflects my position that students should be able to use the latest tools in information technology and online practices.

6. Teaching strategies

Each week 2 lectures will introduce topics of early embryological development and later focus upon systematic development. Laboratories are designed to complement the course lecture material, allow individual and small group work and also include topics related to specific researchers within the school. Laboratories also include time for tutorials in online group project work and for to discuss and co-ordinate the group project.

7. Assessment

There are three main forms of course assessment tasks shown below.

Assessment task	Length	Weight	Learning outcomes assessed	Graduate attributes assessed	Due date
Individual Tasks	Throughout the semester	20 %	Critical thinking and initiative, information literacy	Scholarly enquiry of research literature	Throughout the semester
Group Project	One online project page	20 %	Information literacy and effective communication	Initiative and collaborative work	Week 9 peer assessment, Week 11 final assessment
Theory Examination	2 hours	60 %	Engagement with the relevant disciplinary knowledge in its interdisciplinary context	Apply developmental theory to anatomical development	Within the S2 exam period 29 Oct to 16 Nov

More detailed assessment information can be found online:

<http://php.med.unsw.edu.au/embryology/index.php?title=ANAT2341> Embryology 2012

Submission of Assessment Tasks

Student individual and group assessment tasks are submitted online, except for some specialized tasks submitted by guest lecturers. Submission dates will be given when the task is initially set and late submissions penalized by 5% / day late.

8. Academic honesty and plagiarism

Plagiarism is using the words or ideas of others and presenting them as your own. Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. With regard to the group project work please note the statement:

"Claiming credit for a proportion of work contributed to a group assessment item that is greater than that actually contributed;"

Note - All student online contributions are recorded by date, time, and the actual contributed content.

Academic Misconduct carries penalties. If a student is found guilty of academic misconduct, the penalties include warnings, remedial educative action, being failed in an assignment or excluded from the University for two years. The University has also adopted an educative approach to plagiarism and has developed a range of resources to support students.

For more information see: <http://www.lc.unsw.edu.au/plagiarism>

9. Course schedule

The provisional 2012 timetable is shown below and is subject to change without notice some content may also be replaced by specialist invited guest lecturers.

Week	Monday Date	Lecture 1 Tue 11am – 12 pm Biomedical Theatre E	Lecture 2 Tue 3 – 4 pm Biomedical Theatre E	Laboratory Wed 10am – 12 pm Wallace Wurth G4 Lab
2	23 Jul	Embryology Introduction	Fertilization	Lab 1
3	30 Jul	Week 1&2 Development	Week 3 Development	Lab 2
4	6 Aug	Mesoderm Development	Ectoderm, Early Neural, Neural Crest	Lab 3
5	13 Aug	Early Vascular Development	Placenta	Lab 4
6	20 Aug	Endoderm, Early Gastrointestinal	Respiratory Development	Lab 5
7	27 Aug	Head Development	Neural Crest Development	Lab 6
	3 Sep	Mid-semester	break	
8	10 Sep	Musculoskeletal Development	Limb Development	Lab 7
9	17 Sep	Kidney	Genital	Lab 8
		Group Project	Due Date Peer Assessment	After Lab
10	24 Sep	Endocrine	Integumentary	Lab 9
				Lab 10
11	1 Oct*	Neural	Sensory	After Lab
	3 Oct	Group Project	Due Date Final Assessment	
12	8 Oct	Heart	Stem Cells	Lab 11
13	15 Oct	Fetal	Birth and Revision	Lab 12
	20 Oct	Study Week		
	26 Oct	to 13 Nov	Examination - TBA	

* Public Holiday - Labour Day Monday 1 October

Laboratories above relate to lecture content for each week or specialist researcher presentations and topics. Time is made available in some labs for project group work.

See also online: http://php.med.unsw.edu.au/embryology/index.php?title=ANAT2341_Course_Timetable_2012

10. Expected Resources for students

Textbooks - Either of the textbooks listed below are recommended for this course and page references to both are given in each lecture. There are additional embryology textbooks that can also be used, consult course organizer. Both textbooks are currently accessible online through the UNSW Library connection (links are included in online lecture and practical materials).

- Moore, KL, Persuad, TVN & Torchia MG. (2011) **The Developing Human: Clinically Oriented Embryology** (9th ed.). Philadelphia: Saunders.
- Schoenwolf, GC, Bleyl, SB, Brauer, PR & Francis-West, PH. (2009) **Larsen's Human Embryology** (4th ed.). New York; Edinburgh: Churchill Livingstone.

Online materials - Supported by the online education site **UNSW Embryology**:

<http://php.med.unsw.edu.au/embryology>

Each student will be provided access to an online page for their individual assessments and the group project. Blackboard and Moodle are not currently used for this course.

Additional online resources –

- School of Medical Sciences (SOMS) <http://medicallsciences.med.unsw.edu.au>
- SOMS Health and Safety (OHS) <http://medicallsciences.med.unsw.edu.au/SOMSWeb.nsf/page/Health+and+Safety>
- UNSW Library website <http://info.library.unsw.edu.au/web/services/services.html>

11. Course evaluation and development

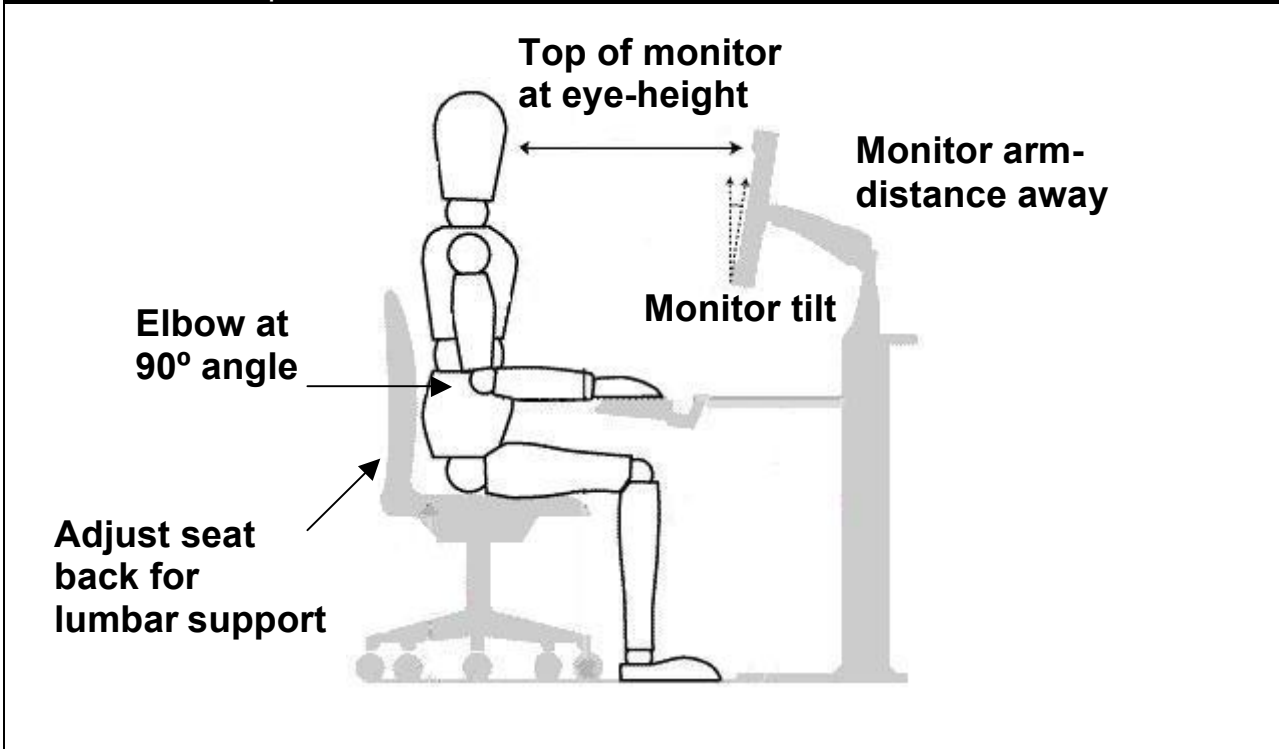
Periodically student evaluative feedback on the course is gathered, using among other means, UNSW Course and Teaching Evaluation and Improvement (CATEI) Process. Student feedback is taken seriously, and continual course improvements are based in part on such feedback. For example, previous student feedback on lecture slides availability and online materials navigation has led to changes in both lecture presentations and development of a new online resource with better navigation and access.

12. Other information to be included

- Students are expected to attend all lectures and laboratories and absences require prior arrangement with the course coordinator and/or a medical certificate. See also the UNSW Student conduct policy <https://my.unsw.edu.au/student/academiclife/assessment/StudentConductPolicy.html>
- Information on relevant Health and Safety policies and expectations as outlined at: <http://medicallsciences.med.unsw.edu.au/SOMSWeb.nsf/page/Health+and+Safety>
- Theory examination will be a two-hour exam in the examination period semester 2.
- Students should refer to the UNSW website for further advice concerning special consideration in the event of illness or misadventure <https://my.unsw.edu.au/student/atoz/SpecialConsideration.html>
- Student equity and diversity issues via Student Equity Officers (Disability) in the Student Equity and Diversity Unit (9385 4734). Further information for students with disabilities is available at <http://www.studentequity.unsw.edu.au/content/Services/Disabilityservices.cfm>

Hazards	Risks	Controls
Ergonomics Electrical	Musculoskeletal pain. Shock/fire.	Correct workstation set-up. Check electrical equipment in good condition before use. All electrical equipment tested and tagged.

Workstation set-up



Personal Protective Equipment

Not necessary in these computer practical classes.

Emergency Procedures

In the event of an alarm, follow the instructions of the demonstrator. The initial sound is advising you to prepare for evacuation and during this time start packing up your things. The second sound gives instruction to leave. The Wallace Wurth assembly point is the lawn in front of the Chancellery. In the event of an injury, inform the demonstrator. First aiders and contact details are on display by the lifts. There is a first aid kit in the laboratory and the Wallace Wurth security office.

Clean up and waste disposal

No apparatus or chemicals used in these computer practical classes.

Declaration

I have read and understand the safety requirements for these practical classes and I will observe these requirements.

Signature:..... Date:.....

Student Number:.....