UNSW SYDNEY

FACULTY OF SCIENCE

SCHOOL OF OPTOMETRY AND VISION SCIENCE

VISN3111

DEVELOPMENT AND AGING OF THE VISUAL SYSTEM

SEMESTER 1 2019

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Faculty of Science - Course Outline

1. Information about the Course

NB: Some of this information is available on the UNSW Handbook[1]

Year of Delivery	2019
Course Code	VISN3111
Course Name	Development and aging of the visual system
Academic Unit	School of Optometry and Vision Science
Level of Course	3rd year undergraduate
Units of Credit	6UOC
Session(s) Offered	Semester 1
Assumed Knowledge, Prerequisites or Co-requisites	VISN2211
Hours per Week	5 to 6 hours per week face-to-face Note that workload expectations for full time students is 150 hours of work per course per semester. A full load is 40 hours per week, so you are expected to spend a minimum of 13 hours per week during a study term. This course has been designed with this workload in mind. Most weeks, you will have 5 to 6 hours of face-to-face classes so you will need to devote the remaining 7 to 8 hours per week studying the readings, revising the lecture materials and working on the assigned activities.
Number of Weeks	10 weeks
Commencement Date	18th February 2019.

Summary of Course Structure (for details see 'Course Schedule')

Component	HPW	Time	Day	Location
Lecture 1	2	12-2 pm	Monday	Colombo Theatre C
Lecture 2	1	1-2 pm	Tuesday	OMB149
Lecture 3	1	10-11am	Thursday	Colombo Theatre C
Tutorial/Laboratory share the same time slots	1, not every week, refer to schedule (Wks 3-9 inclusive)	Grp 1 Mon 2-3 pm Grp 2 Mon 4-5 pm Grp 3 Tues 11 am-12 noon Grp 4 Tues 2-3 pm Grp 5 Tues 3-4	See left	Wk 3 and 4 – in subgroups as announced on Moodle Wk 4-9 AOP seminar room
Other	1, not every week, refer to schedule. Wk 8 is compulsory. Each subgroup must attend one small group tutorial with their tutor as announced on Moodle	Grp 1 Fri 10-11 am Grp 2 Fri 11 am-12 noon Grp 3 Fri 12 noon -1 pm Grp 4 Fri 2-3 pm Grp 5 Fri 3-4 pm	See left	OMBLG25 Optometry and Vision Science Computer Laboratory
TOTAL	5 to 6			
Special Details	Students are required to have access to a computer and a speedy internet connection. Students will note that during the Other sessions, the Optometry and Vision Science Computer Laboratory is booked for you. When the schedule states “Independent Study”, this means that the room is available only to students in that enrolled group at that time to conduct research and meet with their group discussion/presentation colleagues. Attendance for “Independent Study” classes is not monitored. For 5 times during the year, there will also be a small group tutorial held in that room with the students who are due to run the group discussion in the following week with their tutor; this is a compulsory activity for those students. Other students in the group are also permitted in the room but must keep their voices low. *Note that sometimes timetabling has resulted in clashes for the teaching staff, so it is possible that your tutor will request to arrange an alternative time, date and room in that week, or may even request a Skype meeting. If that is the case, please work with your tutors to find a mutually suitable time*.			

	Students are encouraged to consult with the lecturers or tutors who taught that material if students have any questions about the course materials. A bulletin board for questions and suggestions is also available in Moodle. Most lecturers will be able to respond within 2 days. The practical classes are conducted in smaller groups due to small room size. For those classes, you should attend at the required time. One of the practical classes will be conducted at the Centre for Eye Health. Patients who attend the centre are patients of a low vision service called Guide Dogs NSW/ACT. The Centre for Eye Health has been very kind to allow us the use of their visual electrophysiology room and have rescheduled their patients to accommodate us so that we can run the practical class. Please return the favour. When scheduled for that class, students should wear business attire, sign in to the student visitor register at reception, and be sensitive to the fact that the centre sees patients who have been referred as they are likely to have a sight-threatening eye condition and may be easily upset. It is important to behave professionally and facilitate the flow of patients and staff through the clinic.

2. Staff Involved in the Course

Staff	Role	Name	Contact Details	Consultation Times
Course Convenor		Dr Mei Ying Boon	m.boon@unsw.edu.au	Available before or after lectures. Otherwise, email to set up a meeting or ask questions.
Additional Teaching Staff	Lecturers & Facilitators	Associate Professor Barbara Junghans Dr Sieu Khuu Dr Philip Anderton Dr Lisa Nivison-Smith	b.junghans@unsw.edu.au s.khuu@unsw.edu.au p.anderton@unsw.edu.au l.nivison-smith@unsw.edu.au	Online discussion board available for questions and lecturers may be emailed questions or for consultation times.
	Tutors & Demonstrators	Dr Angela Lai Dr Philip Anderton Ms Zahra Tajbakhsh Lecturers are also tutors	x.lai@unsw.edu.au p.anderton@unsw.edu.au z.tajbakhsh@student.unsw.edu.au	
	Technical & Laboratory Staff	Dr Dale Larden	d.larden@unsw.edu.au	Please email to make an appointment
	Other Support Staff			

[1] UNSW Online Handbook: http://www.handbook.unsw.edu.au

3. Course Details

Course Description[2] (Handbook Entry)	Objectives: An understanding of the development and aging of the visual system. The effect of disease on the visual system is briefly discussed. Brief curriculum: Development of the visual system: embryology of the eye and brain, axon pathfinding, receptive field development, development of the visual cortex, critical periods, plasticity, reorganisation of cortical inputs; Development of vision: spatial vision, colour vision, motion perception, shape perception, binocularity; Ageing: physiology of aging, effect of age on brain function, effect of age on the visual system, effect of age on vision; Effect of disease: the effects of brain injury, retinal disease, refractive error, amblyopia and drugs on visual perception are briefly covered.

Course Aims[3]	The aim of this course is to develop understanding of how the human visual system undergoes normal and abnormal age-related changes and the perceptual and functional consequences.
Student Learning Outcomes[4]	After completing this course, students should be able to: 1. Explain why vision is poor in the first few years of life and how we know this, how and why vision may not develop normally if impeded during early life, and how and why vision deteriorates in later life. 2. Demonstrate developed communication skills important to participate in scientific discourse, such as in the peer reviewed literature, online forums or conferences, about current, developing, future developments and clinical applications of vision science knowledge relating to the development of the visual system. Skills include verbal, written and listening skills. 3. Demonstrate developed skills in critiquing and interpreting the literature on a particular topic relevant to the course topics.

Graduate Attributes Developed in this Course[5]		
Science Graduate Attributes[5] *(maybe replaced or augmented by UNSW, School or professional attributes)*	Select the level of FOCUS *0 = NO FOCUS* *1 = MINIMAL* *2 = MINOR* *3 = MAJOR*	Activities / Assessment
Research, inquiry and analytical thinking abilities	*3*	During the course, you will be presented with topics related to course material. In order to understand these topics, you will need to critically analyse published material relevant to them.
Capability and motivation for intellectual development	*3*	Intellectual development is encouraged by the requirement to read and interpret the literature on visual development and ageing, as described above. You will be asked to start to extend your knowledge of scientific principles to include experimental design during the class discussions and to be able to argue an opinion based on available facts in your written assignment.
Ethical, social and professional understanding	*2*	Vision science underpins the profession of optometry, and in this course you will become aware of the importance of vision science in the practice of optometry and within the eye care industry. Ethics may also be discussed within the context of experimental design and conflict-of-interest within the two major assignments.
Communication	*3*	Online forum discussion, face-to-face discussion with your colleagues during tutorials and scientific writing are included in this course.
Teamwork, collaborative and management skills	*3*	Teamwork will be required when preparing for the class discussion and during the practical classes.
Information literacy	*3*	The course-related topics will involve formulating search strategies to gain an understanding of the research area.

Major Topics (Syllabus Outline)	The syllabus includes the following topics: • Defining development, maturation and ageing • Methods of measuring visual function in the developing visual system • Embryology of the eye and brain • Postnatal development of the eye and visual system • Refractive development • Normal and abnormal development of vision • Amblyopia • Ageing of the ocular structures, visual system, visual brain • Perceptual and functional consequences of ageing of the visual system and impaired vision • Rise of low vision with age
Relationship to Other Courses within the Program	This course is a prerequisite to VISN3211, which requires more active involvement in the course, independent learning, with in-depth investigation into one or more areas of vision science. The independent and team work you will do in the present course offers a solid basis for more in- depth independent and collaborative work. This course also prepares students for clinical practice, particularly for those patients who are still maturing or are aged.

[2] UNSW Handbook: http://www.handbook.unsw.edu.au
[3] Learning and Teaching Unit: Course Outlines
[4] Learning and Teaching Unit: Learning Outcomes

[5] Contextualised Science Graduate Attributes: https://www.science.unsw.edu.au/our-faculty/science-graduate-attributes

4. Rationale and Strategies Underpinning the Course

Teaching Strategies	Teaching strategies include the following: lectures, readings, practical classes, group discussion and tutorials, and a written assignment.
Rationale for learning and teaching in this course[6,7]	Face-to-face lectures are important as this is where thinking skills are modelled, and students can ask questions of their lecturers in real time. Lecturers will also pose questions at suitable intervals, where students may respond to check their understanding of the lecture materials. You should be guided by your lecturers as to the level of depth of knowledge you should learn the materials. It is intended that as you study, you also draw on your learning from other courses, such as anatomy and physiology, cell biology, genetics and vision science courses as those courses were will support your learning in this course. Readings are an essential part of the course. A number of these readings cover methods used in the research of visual development, that have not been covered in previous courses, or support other lecture materials. These articles are examinable. As part of the course, in groups, students will select a recent research article around a discussion topic for critical analysis. If students are unable to select a reading in a timely manner, the tutor in charge of that topic will assign an article. Hence, in addition to the lecturer assigned readings, there will be 5 student-assigned readings. The student selected articles will only be approved if they meet the stated criteria, including supporting understanding of the topics covered in the curriculum and the student learning outcomes. These readings are not examinable but the quality of your responses to 3 out of the 5 articles (self-nominated) contribute to your group discussion mark. Practical classes are designed to demonstrate key principles introduced during the lectures and readings. These will be supported by a tutorial. Student learning outcome 1 is addressed by these classes. There is a mid-session exam which is intended to assist you to keep up with the materials in preparation for the final examination. There is a one hour scheduled lecture during which you will be provided with general feedback about the examination. At the end of term, there will be a self-test online quiz to aid you in your revision and check your understanding of the materials. The self-test quiz is not worth any marks but is intended to be a formative assessment. This course is part of a suite of Vision Science courses. This course gives you the opportunity to delve more deeply into different aspects of the ageing and developing visual system, requiring a greater level of independence in learning than previous years. The group discussion activities are designed to both consolidate your knowledge and foster the development of graduate attributes e.g. communication skills, teamwork and collaborative skills, ethics and professional understanding. The group discussion comprises both preparing the discussion, with the support of your lecturers and tutors, as well as participating in discussions (both online and face-to-face) about your own assigned topic, as well as the topics of other groups within your class. The written assignment is an opportunity for each student to develop scientific writing skills by coming to a position regarding the conclusions of the research article that they selected for class discussion, and to receive feedback. The group discussion and written assignments are supported through a small group tutorial (maximum 5 students per group) during the scheduled Other class session. This is a compulsory class and students should be prepared to make the most of this time. There is an emphasis on communication skills in this course as it is through communication that 1) the community can understand what we learn, 2) new discoveries are conveyed by scientists to the public and peers for comment, and 3) research / discoveries are enabled to be translated by policy makers or stakeholders in industry into real life outcomes.

[6] Reflecting on your teaching

5. Course Schedule

	Lectures L1 & L2, Mon 12-2 L3 Tues 1-2 L4 Thurs 10-11 **Topics & Lecturers**	**Tutorials** Grp 1 Mon 2-3 pm Grp 2 Mon 4-5 pm Grp 3 Tues 11 am - 12 noon Grp 4 Tues 2-3 pm Grp 5 Tues 3-4 pm	**Practical** During your tutorial time slot. See Moodle to check location and timing of your class.	**Other** Grp 1 Fri 10-11 am Grp 2 Fri 11 am -12 noon Grp 3 Fri 12 noon - 1 pm Grp 4 Fri 2-3 pm Grp 5 Fri 3-4 pm	**Assignment and Submission dates** (see also 'Assessment Tasks & Feedback's
Week 1 (commencing 18 Feb)	L1 Introduction to the course (MB) L2 Lifespan view 1 (MB) L3 Lifespan view 2 (MB) L4 Lifespan view 3 (MB)	None	None	None	Eye Development Group, start article approval process
Week 2 (commencing 25 Feb)	L1 Eye development 1 (MB) L2 Eye development 2 (MB) L3 Eye development 3 (MB) L4 Normal and abnormal refractive development 1 (BJ)	None	None	None	Refractive Development Group, start article approval process
Week 3 (commencing 4 March)	L1 Normal and abnormal refractive development 2 (BJ) L2 Normal and abnormal refractive development 3 (BJ) L3 Normal and abnormal visual pathway molecular development 1 (PA) L4 Normal and abnormal visual pathway molecular development 2 (PA)	None	Measuring infant visual function (AL, PA, MB)	Other (MB) and Online Forum – eye development	Synapses/visual pathway development group, start article approval process
Week 4 4 (commencing 11 March)	L1 Normal and abnormal visual pathway molecular development 3 (PA) L2 Normal and abnormal visual pathway molecular development 4 (PA) L3 Normal visual development 1 (MB) L4 Normal visual development 2 (MB)	None	Measuring infant visual function (AL, PA, MB)	Other (BJ) and Online Forum - refractive development	Amblyopia group, start article approval process
Week 5 (commencing 18 March)	L1 Midsession exam L2 Midsession exam L3 Normal visual development 3 (MB) L4 Abnormal visual development 1 (MB)	Eye development (MB)	None	Other (PA) and Online Forum - Synapses/visual pathway development	Ageing visual system group, start article approval process Midsession exam
Week 6 * (commencing 25 March)	L1 Abnormal visual development 2 (MB) L2 Abnormal visual development 3 (MB) L3 Amblyopia 1 (SK) L4 Amblyopia 2 (SK)	Refractive development (BJ)	None	Other (SK) and Online Forum – Amblyopia	Friday Written Assignment due (Eye development group)
Week 7 (commencing 1 April)	L1 Amblyopia 3 (amblyopic deficit) (SK) L2 Amblyopia 4 (science of amblyopia treatment) (MB) L3 Amblyopia 5 (science of amblyopia treatment) (MB) L4 Midsession examination feedback (MB)	Synapses/visual pathway development (PA)	None	Other (MB/LNS) and Online Forum – Ageing visual system	Friday Written Assignment due (Refractive development group)

Week 8 (commencing 8 April)	L1 Ageing eye 1 (MB) L2 Ageing eye 2 (MB) L3 Ageing eye 3 (MB) L4 Ageing eye (Lisa Nivison Smith)	Amblyopia (SK)	None	Measuring Infant Visual Function Tutorial – All students (MB)	Friday Written Assignment due (Synapse/visual pathway development group)
Week 9 (commencing 15 April)	L1 Ageing visual system 1 (MB) L2 Ageing visual system 2 (MB) L3 Ageing and low vision (MB) L4 Course summary – lecture will be presented via video (MB)	Ageing visual system (MB/LNS)	None	Independent study	Friday Written Assignment due (Amblyopia group)
Week 10 (commencing 22 April)	None	None	None	Independent study - Self-test online quiz	Friday Written Assignment due (Ageing Visual System group)

[7] UNSW Virtual Handbook: http://www.handbook.unsw.edu.au
[8] UNSW Timetable: http://www.timetable.unsw.edu.au/

6. Assessment Tasks and Feedback[10]

Task	Knowledge & abilities assessed	Assessment Criteria	% of total mark	Date of		Feedback		
				Release	Submission	WHO	WHEN	HOW
Final theory examination	Examines all theoretical and practical knowledge in the course.	Accuracy of answers	45%#	As per examination timetable		Lecturers and instructors	When final marks are released	Final mark
Midsession exam	Examines all theoretical and practical knowledge in the course in Weeks 1-4 inclusive	Accuracy of answers	20%	Week 5		Lecturers and instructors	Marks through Moodle within 2 weeks	Marks, Answer sheet and general class feedback on strengths and weaknesses
Written assignment	A written assignment on a matter related to visual development.	Analysis and appraisal of the research article Discussion of the topic of the research study Written communication skills	20%	Week 10	Online	Lecturers and instructors	During exam period	Mark, marking rubric, and general class feedback on strengths and weaknesses through Moodle
Group Discussion	Critical analysis of research articles with your peers in a group discussion setting.	Contribution to own group discussion on the group research article and the discussion forum on other groups' research articles; Presentation of assigned aspect(s) of the research article to the class; Facilitation of class discussion on the research article and topic of the research study both online and in the break out small groups.	15%	As per schedule according to groups	As per schedule according to groups	Instructors	Stuvac	Mark

hurdle indicates that this exam must be passed in order to pass the course. Failure to achieve 50% in the final exam will result in a grade of Unsatisfactory Failure (UF) because an essential component of the course has been failed. Note: a UF requires you to repeat the course regardless of the mark, and will prevent you from undertaking subsequent courses for which VISN3111 is a pre-requisite.;[10] Approaches to assessment: https://teaching.unsw.edu.au/assessment

Assessment details

Final exam and Mid-session exam
The final exam is designed to test all theoretical and practical knowledge in the course and the Mid-session exam is designed to test all theoretical and practical knowledge covered in the first 4 weeks. Both exams are of the same format, having 3 parts. Part 1 consists of MCQs, the correct answers of which are randomly allocated. Please note if guess work is evident and confirmed, this part will not be marked; and you will receive 0 marks. Part 2 consists of Short Answer questions where you will be required to provide a word or a phrase of no more than 5 words to complete a chart, a diagram, a sentence or an answer to a question. Part 3 consists of open-ended questions where you will need to provide extended answers.

For each exam, you will be provided with an exam booklet of questions and answer sheet where you record all your answers. Please note you will not be given extra time to transfer your answers should you decide to use draft, so please ensure you complete your answer sheet in the given time to get the best mark.

Group Discussion and Written Assignment Assessment Tasks

The two assessment tasks address the following course learning outcomes

1. Explain why vision is poor in the first few years of life and how we know this, how and why vision may not develop normally if impeded during early life, and how and why vision deteriorates in later life.
2. Demonstrate developed communication skills important to participate in scientific discourse, such as in the peer reviewed literature, online forums or conferences, about current, developing, future developments and clinical applications of vision science knowledge relating to the development of the visual system. Skills include verbal, written and listening skills.
3. Demonstrate developed skills in critiquing and interpreting the literature on a particular topic relevant to the course topics.

Assessment details

These 2 assessment tasks are derived from a group research project. At the start of the term, you will be randomly assigned into groups of no more than 5 students to work on one of five given topics relating to the development and aging of the visual system. (Note that allocation of groups has been announced on a separate document in Moodle). The discussion groups are colour coded.

- Yellow: Eye development (Dr. Boon)
- Green: Refractive development (A/Prof. Junghans)
- Blue: Synapses/Visual pathway development (Dr Anderton)
- Pink: Amblyopia (Dr Khuu)
- Grey: Ageing eye and visual system (Dr Boon and Dr Nivison-Smith)

As a group, you will be required to formulate a research question relating to the topic assigned to your group. Based on the research question, you will perform a library search to locate a suitable research article. The article must be:

- directly relevant to the discussion topic and the course materials
- recent (within 5 years of publication)
- an original experimental study or discussion i.e. not a review article where a number of research studies are reviewed.
- from a peer-reviewed journal.

To ensure the selected article meets these criteria, you will be required to submit the article for approval at least 1 week before your group meets the tutor, by emailing a copy (pdf) to your tutor. Once your selected article is approved on time, you will have 1 week, if submission of the selected article was on time, to review the article and prepare for the small group discussion with your tutor. The purpose of the group discussion is for you to learn to critically appraise the research article, and to come to a shared understanding of how trustworthy (validity and reliability) and useful (relevance and significance) the conclusions of the study are.

After your group's discussion with your tutor, you will be required to continue the discussion on the article to the entire class in the Moodle site online forum of the course for 2 weeks leading to your group's scheduled Group Discussion tutorial session. To initiate the class discussion in the online forum, as a group, you should provide the citation of the research article, a link to an electronic copy of the article and some brief background as to how your group located and selected your research article.

On the Group Discussion tutorial session, firstly you will be required to take turns to talk about the article. This presentation should only take 10 minutes (about 2 minutes per team member) and cover the following:

1. Reintroduce the research question, discuss the significance of the question (the importance of this research question and its relationship with the course materials) and how the selected research article addresses your group's research question
2. Briefly summarise the aims of the research article, method (if the article is a research study), and key findings. Highlight those aspects that may be unfamiliar or confusing to your audience.

After the presentation, the audience will break out in small groups and each of you will engage one group in a discussion of the article and the topic discussed in the article. The purpose of this discussion is to bring your group to a shared understanding of the trustworthiness of the findings and their implications for optometry, vision science and the eye health of the general community. This break-out small group discussion will take approximately 10 minutes and may include any of the following:

- Controversial elements in the article
- Strengths in the experimental design
- Weaknesses in the experimental design
- Ethical issues or conflicts of interest
- Hot topics from the online forum (if any)
- Appropriateness of the interpretation

For the next 10 minutes, each of you will report back to the class as a whole on the content of your break-out small group discussion and highlight how the findings (taking into account their validity) may impact on the future of optometry, vision science and the ocular or visual health of the general community (2 minutes each member).

In the final 5-10 minutes of your Group Discussion tutorial session, your tutor(s) will ask each of you in your group at least one question about any aspect of the selected article and/or ask you to provide a general comment on the article findings, if not covered earlier during the Group Discussion tutorial session.

Post the Group Discussion tutorial session, as individuals, you will be asked to draw on insights from the group and class discussions to conduct further research and write a commentary for assessment. This written assignment will consist of an analysis and appraisal of the research article and how it informs our growing knowledge of the overall topic. For example, if you select an article on the effect of night lights on myopia development, you would write a commentary that consists of a critical appraisal of the article followed by an explanation of its key contributions to the topic area of refractive development as you understand it. You will need to read more widely in order to understand how this research article fits into the context of current knowledge. You have a maximum of 1000 words (+/- 10%) to write your commentary and must include a minimum of 5 references in support of your commentary.

In addition to work associated with your group research project, you will also be required to participate actively in the class discussions run by other groups; both online and in the break out small groups. Whilst you are encouraged to make as many meaningful contributions as possible, only the 3 best postings in the discussion forum will be marked. These postings will be of a minimum of 100 words and maximum of 250 words and will be nominated by you. Please note: only one posting is allowed for assessment in any one topic.

The following table summarises key details and timeline of the 2 assessment tasks: Written assignment and Group discussion.

Timeline	Activities	Associated assessment tasks
Week 1	Allocation of group, assignment of topics and schedule for group meetings with tutor and group presentations	None
2 weeks before the group's scheduled meeting with tutor	Locating a suitable research article, submitting for approval and reviewing the article. Must be approved on the Monday of the week before meeting with your tutor.	Group discussion: Contribution to own group discussion – preparation
Meeting with tutor	Appraising and discussing the research article	Group discussion: Contribution to own group discussion – discussion
Leading to the group's scheduled presentation	Initiating and facilitating the class discussion on the research article in the online discussion forum	Group discussion: Facilitation of class discussion in the online forum
Group discussion tutorial session	Presenting on the research article (10 minutes in total, 2 minutes each member) Facilitating break-out small group discussion (10 minutes) Summarising discussion back to the class (10 minutes in total, 2 minutes each member)	Group discussion: Presentation of assigned aspects of the research article to the class; Facilitation and report of break-out group discussion
Friday of the week following the group discussion tutorial	Preparing and submitting the commentary on the research article	Written assignment Commentary on the article and its contribution to the discipline knowledge of the topic area
Throughout term	Contributing to the class discussions run by other groups	Group discussion: Contribution to the class discussions facilitated by other groups

To assist yourself in meeting all deadlines, fill in the following:

Discussion Topic:	
Tutor name(s):	
Article must be approved by (due date):	
Other class date:	
Online forum announcement and closure (due date):	
Group discussion tutorial session (due date):	
Written assignment due (due date):	

7. Additional Resources and Support

Text Books	None, however, there are recommended readings that will be indicated by each lecturer.
Course Manual	A Course manual that covers practicals, tutorials and preparation for assignments will be made available for download. It will assist you in organising your time so that you do not miss deadlines, particularly in relation to group work.
Required Readings	Required readings, which may comprise chapters from textbooks or key articles, will be indicated clearly as assessable during class. Students must download the requisite readings from the UNSW library using the literature search skills taught in VISN1101.
Additional Readings	These are readings which elaborate on concepts taught in task. Students will be directed to those which are essential reading, although not assessable in its entirety. They should be downloaded from the UNSW library using the literature search skills taught in VISN1101.
Recommended Internet Sites	https://www.babycenter.com/pregnancy is an excellent resource starting from embryology, as you can track what else is developing along-side the eye and visual system.
Societies	http://www.optomsoc.com
Computer Laboratories or Study Spaces	Room OMB LG21 is available to you for one hour each week for independent learning sessions, for your formal meetings with your tutor for assistance in interpreting your discussion article findings and to help you to work with your partner(s) on your discussion topic. The computers in the room can be used to research the topic you will be discussing. If you prefer, you may work on this research elsewhere. Attendance is only compulsory for your allocated group time and the Week 8 tutorial.

8. Required Equipment, Training and Enabling Skills

Equipment Required	None
Enabling Skills Training Required to Complete this Course	Some resources should be accessed. These will be available in the Course Manual and in the Moodle Administration section. These include links to UNSW resources about group work skills, discussion skills, writing skills, endnote skills, videos to watch regarding procedures.

9. Course Evaluation and Development

Student feedback is gathered periodically by various means. Such feedback is considered carefully with a view to acting on it constructively wherever possible. This course outline conveys how feedback has helped to shape and develop this course.

Mechanisms of Review	Last Review Date	Comments or Changes Resulting from Reviews
Major Course Review	2018	The learning outcomes and assessments were revised and approved by the university in late 2018.
myExperience[11]		Previous students told us it was difficult to follow the listed schedule for the group discussion assignment. We have responded to this feedback by colour coding the teaching schedule. Further the Course Outline has been revised to facilitate students to clarify task due dates in the first week to enable planning of time throughout the semester. Previous students told us they wanted more help with the analysis generated from the practical classes and timelier feedback. This term, a tutorial has been scheduled so that the tutor may teach students face-to-face how to analyse the data and provide feedback on performance in the practical tasks in class. Previous students told us they would like question-by-question feedback for the midsession examination. We have responded to this feedback by scheduling feedback on the midsession examination in Week 7 during a lecture time slot during which an answer sheet will be provided. Previous students have told us that they would like to have longer to respond to the online forum. We have responded to this feedback by extending the online forum from one to two weeks.

[11] myExperience process: https://teaching.unsw.edu.au/myexperience

10. Administration Matters

Expectations of Students	Some components of this course are compulsory, and you are expected to attend. Attendance at compulsory course components will be monitored by taking a roll. You may lose marks from your final course mark for non-participation in classes, unless you submit an application for special consideration and provide appropriate documentation. The compulsory course components, and the justification for their compulsory nature, are as follows: • All practical classes in this course must be attended because they act to reinforce theoretical components of the course, while teaching critical practical clinical skills prior to use in the clinic in the final year of the program. • All tutorial classes in this course must be attended as you will be developing your critical thinking, research study design and discussion skills during these classes. • You are scheduled for two OTHER class (which may be conducted at a mutually suitable time if the tutor is experiencing timetable clashes) which are compulsory. In one class, you will be with your4-5 fellow discussion group members where you will discuss your article with your tutor. In another class, you will analyse the data generated from your practical classes together with the tutor. Attendance registers: In courses where signature on an attendance register is used to monitor attendance, all enrolled students must provide a specimen signature on a central School register by the end of the first week of semester. The central register will be overseen by Dr Dale Larden/Paul Zytnik. Please bring your student card with you when providing your specimen signature. Only one variant of your signature may be used on the central register and on all attendance registers. If your signature does not appear on an attendance register for a compulsory course component, or if the signature on the attendance register does not match the signature on the central register, it will be assumed that you were absent from the compulsory course component. Attempts to falsify the central register or attendance registers will be managed under UNSW Student Misconduct Procedures: https://www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf The University uses email as an official form of communication for students. All UNSW students have their own email account. The School of Optometry and Vision Science will also make use of this form of communication. It is extremely important that you know how to use your Zmail and ensure that you check it regularly. You are advised to link your official UNSW email address to your habitual email address (e.g. hotmail). You will miss out on vital information from the School and University if you do not check your Zmail. For more information or if you are having connection or access problems, see: IT Service Centre www.it.unsw.edu.au/ Telephone: 02 9385 1333 Email: itservicecentre@unsw.edu.au
Work Health and Safety[12]	Information on relevant policies and expectations is provided during General Safety Induction training. A copy of the Induction booklet distributed at this training is available from the School of Optometry and Vision Science office (RMB3.003) and the School website at: https://www.optometry.unsw.edu.au/whs/work-health-and-safety

Assessment Procedures UNSW Assessment Policy[13]	SCHOOL OF OPTOMETRY AND VISION SCIENCE, UNSW SUPPLEMENTARY EXAMINATION INFORMATION, 2018 There are two circumstances whereby a supplementary examination may be granted: COMPETENCY IN DOUBT Students whose competency level is in doubt after the final examination(s) may be eligible to sit a supplementary examination in the course(s) concerned. The School of Optometry and Vision Science is updating its policy regarding supplementary examinations in cases where competency is in doubt. Please check the School website for this information. SPECIAL CONSIDERATION On some occasions, sickness, misadventure or other circumstances beyond your control may prevent you from completing a course requirement, such as attending a formal end of semester examination. In these cases you may apply for Special Consideration. To do this you must make formal application for Special Consideration for the course/s affected as soon as practicable after the problem occurs and within three working days of the assessment to which it refers. The application must be made via Online Services in myUNSW. Log into myUNSW and go to My Student Profile tab > My Student Services > Online Services > Special Consideration. Submit the application (including supporting documentation) to UNSW Student Central. Special Consideration - Pre-Existing Conditions Many conditions that are the subject of special consideration applications are pre-existing and could be used repeatedly to gain examinations at a later date. These include conditions aggravated or triggered by the stress of the assessment. With the help of your doctor and/or other health care practitioners, steps can be taken ahead of the assessment time to minimise or avoid the consequences of these conditions. When applying for special consideration on the basis of a condition that was already known to be a problem for you and which you have already used as the basis for a special consideration application, the School will require you to provide a certificate that details the preventative measures taken and why they were not successful. This will then be taken into account when considering the application. Absence from a final examination is a serious matter, normally resulting in a Fail (FL) grade. If you are medically unfit to attend an examination, YOU MUST CONTACT THE SCHOOL DIRECTLY ON THE DAY OF THE EXAMINATION TO ADVISE OF THIS (telephone 02 9385 4639, email: optometry@unsw.edu.au). You must also submit a Request for Special Consideration application as detailed above. You are reminded that supplementary examinations are not granted lightly or automatically. Eligibility for supplementary examinations, for both of the above situations, is determined by the School Examination Committee, which meets soon after the formal examination period has ended. You cannot “apply” for a supplementary examination, so please do not contact the School or Course Controllers to request a supplementary examination. It is the responsibility of the student to consult the web site or noticeboard to ascertain whether they have supplementary examinations. This information WILL NOT be conveyed in ANY other manner. Interstate, overseas or any other absence cannot be used as an excuse. This information will be available on the School web site at https://www.optometry.unsw.edu.au (do not confuse the School website with the myUNSW website) and posted on the notice board on Level 3. This information will be available as soon as possible after the School Examination Committee meeting. SUPPLEMENTARY EXAMINATIONS FOR 2019 WILL BE HELD AS FOLLOWS: FOR TERM 1: Monday 27 May - Friday 31 May 2019. Supplementary examinations will be held at the scheduled time only. If students who are granted supplementary examinations do not attend, a failure will be recorded for that course. Students should not make travel arrangements, or any other commitments, before establishing whether or not they have supplementary examinations. Ignorance of these procedures, interstate, overseas or any other absence will not be accepted as an excuse. But usual Special Consideration for illness still applies. If additional assessment is not scheduled, this does NOT indicate whether or not a student

	has passed or failed the course. Results will be received in the usual way. Please do not contact the School in this regard. Please note the above applies to OPTM and VISN courses only. Any information on supplementary examinations for servicing courses (e.g. CHEM****) is the responsibility of the School conducting the course. * Stage 4 includes courses in the first year of the MClinOptom program. Note that supplementary examinations for mid-session examinations, if granted, will also be held during the Monday 27 May - Friday 31 May 2019. • School of Optometry and Vision Science, UNSW, 27 September 2017

[12] UNSW OHS Home page
[13] UNSW Assessment Policy
[14] Student Complaint Procedure

Equity and Diversity	Those students who have a disability or are dealing with personal circumstances that affect their study that requires some adjustment in their teaching or learning environment are encouraged to discuss their study needs with the course Convenor prior to, or at the commencement of, their course, or with the Equity Officer (Disability) in the Equity and Diversity Unit (9385 4734 or http://www.studentequity.unsw.edu.au/). Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made. https://teaching.unsw.edu.au/accessibility-tips		
Student Complaint Procedure[14]	School Contact	Faculty Contact	University Contact
	Prof. Helen Swarbrick h.swarbrick@unsw.edu.au Tel: 9385 4373	A/Prof Janelle Wheat Deputy Dean (Education) Contact details: TBA Or Dr Gavin Edwards Associate Dean (Academic Programs) g.edwards@unsw.edu.au Tel: 9385 4652	Student Integrity Unit (SIU) Telephone 02 9385 8515, email studentcomplaints@unsw.edu.au
University Counselling and Psychological Services[15]	Information on Counselling and Psychological Services [CAPS] is available at: https://www.counselling.unsw.edu.au/ Tel: 9385 5418		

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[15] University Counselling and Psychological Services

11. UNSW Academic Honesty and Plagiarism

What is Plagiarism?

Plagiarism is the presentation of the thoughts or work of another as one's own.
*Examples include:

- direct duplication of the thoughts or work of another, including by copying material, ideas or concepts from a book, article, report or other written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.†

For the purposes of this policy, submitting an assessment item that has already been submitted for academic credit elsewhere may be considered plagiarism.

Knowingly permitting your work to be copied by another student may also be considered to be plagiarism.

Note that an assessment item produced in oral, not written, form, or involving live presentation, may similarly contain plagiarised material.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does *not* amount to plagiarism.

The Learning Centre website is main repository for resources for staff and students on plagiarism and academic honesty. These resources can be located via:

https://student.unsw.edu.au/plagiarism

The Learning Centre also provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

- correct referencing practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle
† Adapted with kind permission from the University of Melbourne