

OPTM8514

Research Project

Course Outline
Term 1, 2023

School of Optometry and Vision Science
Faculty of Medicine & Health

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1. Staff

| Position | Name | Email | Consultation times and locations | Contact Details |
|-----------------|------------------|-------------------------|----------------------------------|-------------------------|
| Course Convenor | Mark Willcox | m.willcox@unsw.edu.au | By appointment | m.willcox@unsw.edu.au |
| Co-convenor | Ajay Vijay | v.ajaykumar@unsw.edu.au | By appointment | v.ajaykumar@unsw.edu.au |
| Tutors | Srikanth Dumpati | s.dumpati@unsw.edu.au | T3 only – by appointment | s.dumpati@unsw.edu.au |

2. Course information

Units of credit: 4*3 = 12 in total

Pre-requisite(s): OPTM6412 and OPTM6422 and enrolment in program 3182 or 8095

Teaching times and locations: To be set in consultation with Project Supervisors

2.1 Course summary

Optometrists need to be able to understand clinical and vision science research. This course introduces students to research and the scientific method. The course covers the following: a literature review, critical analysis of the literature, developing a hypothesis, experimental design, ethical considerations, and the research process. Students will work in pairs, under the supervision and guidance of a member of academic staff, visiting staff, staff optometrists, postgraduate research students or external researchers, to develop a realistic research proposal. Students are responsible for assembling the required materials, subjects and equipment, and conduct the experiment they proposed in (in close consultation with their supervisory teams).

The data are analysed using the appropriate statistical methods, and a publication-quality written report is submitted. Each group is also required to present the results of their research at the annual student research presentation day, as a quick-fire (5-minute) presentation and as a scientific poster.

2.2 Course aims

The course aims to introduce the student to optometric and vision science research and to develop skills in research methods and critical analysis.

2.3 Course learning outcomes (CLO)

At the successful completion of this course you (the student) should be able to:

1. Conduct a thorough literature review
2. Prepare a research proposal and Human Research Ethics Application
3. Design and implement a research plan

4. Collect and analyse data
5. Present research orally and as a poster at a research presentation day
6. Write a scientific report of their research findings, usually based on format of a scientific paper
7. Students will also have the opportunity to:
 - a. Use effective communication skills to present information in a convincing manner
 - b. Show strong information literacy skills by conducting an analytical literature review
 - c. Work collaboratively to explore a research topic.

2.4 Relationship between course and program learning outcomes and assessments

| Course Learning Outcome (CLO) | LO Statement | Related Tasks & Assessment |
|-------------------------------|---|---|
| CLO 1 | Conduct a thorough literature review | Written research report Literature review Supervisors report |
| CLO 2 | Prepare a research proposal and Human Research Ethics Application | Written research report Supervisors report (Ethics online quiz if not writing an ethics application) |
| CLO 3 | Design and implement a research plan | Research presentation Written research report Supervisors report |
| CLO 4 | Collect and analyse data | Research presentation Written research report Literature review Supervisors report and independent assessor report |
| CLO 5 | Present research orally and as a poster at a research presentation day | Research presentation Scoring by academics of SOVS attending presentation day |
| CLO 6 | Write a scientific report of their research findings, based on format of a scientific paper | Written research report Literature review Supervisors report and independent assessor report |

3. Strategies and approaches to learning

3.1 Learning and teaching activities

This course involves true problem based learning. Students will select a research topic from a list provided by interested supervisors, and in a group of (usually) two they will develop a method to solve a research problem. They may not have the immediate knowledge to do this so will need to learn as the project progresses. This is interesting and challenging, and most students find that this is a very enjoyable part of the Optometry and Vision Science program.

Students use authentic active learning to solve a research problem. This deep and personalised learning approach will foster the students' interest in research and the specific research topic, and will hopefully demonstrate that knowledge is not static but rather built on previous work through innovative exploration. These courses apply the theoretical knowledge learnt earlier in the optometry and vision science program to synthesise and evaluate material in order to step forward into an area where little knowledge exists. Hopefully through this process they will discover the fun and engagement of research.

3.2 Expectations of students

Students are reminded that UNSW recommends that a 6 units-of-credit course should involve about 150 hours of study and learning activities. The formal learning activities total approximately 50 hours throughout the term and students are expected (and strongly recommended) to do at least the same number of hours of additional study.

It is expected that all students will participate fully in the design, conduct and reporting of their allocated research project within their assigned pair, and will attend all scheduled group meetings with their research supervisor.

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

4. Course schedule and structure

Some of this information is available on the *Online Handbook*¹ and the *UNSW Timetable*².

Because of the varying clinical rotation commitments in Year 5 of the Optometry program, there is no fixed weekly schedule for the Research Project. Times for meeting with supervisors and for conduct of the various components of these courses should be negotiated on a group by group basis with the nominated project supervisor(s). As a guide, 5 hours per week on average should be spent on fulfilling requirements for these courses. This will vary from week to week at different times of the year, depending on the progress of the research project and other student commitments.

As a guide, the following schedule is recommended in order to complete the requirements of the course:

Students will be allocated to supervisors and topics in November 2021 to allow preparatory communication with the allocated supervisor, and to commence background reading and planning around the research topic.

A Literature Review on the research topic will be submitted to the supervisor no later than towards the end of the second trimester (August 2022)*

A Human Research Ethics Application (either HREC or HREA Panel application as deemed appropriate by the supervisor) relating to the topic will be submitted to the supervisor no later than the end of trimester 2 (August 2022)*. Note that it is highly recommended that Ethics Applications are submitted much earlier than this date. Please check at the relevant website (<http://research.unsw.edu.au/human-ethics-submission-deadlines-meeting-dates>) for closing dates for HREC and HREA Panel applications.

If the project is purely laboratory based with no need to submit an ethics application as no human participant involvement, the students will undertake a test to re-enforce their knowledge of the human ethics application process.

Conduct of the research project should commence as soon as possible once ethics clearance has been obtained, and should be completed by the end of November.

A Written Project Report should be submitted to the supervisor by the end of trimester 3 (November 2022)*. With permission of the supervisor this deadline may be extended into the second week of December, but submission deadlines must take into account the time needed for external examination of the report by two independent assessors and collation of marks before the School Examination Committee meeting in late December.

A Rapid-Fire (5 minute) Presentation and a Poster Presentation will be made at the Student Research Presentation Day, scheduled for a date and time in 2022, usually towards end November, early December.

*Note: Because of the format of Year 5 in the revised program, these dates may be varied at the supervisor's discretion, particularly if students have been engaged in off-campus clinical rotations during the relevant session.

1 UNSW Virtual Handbook: <http://www.handbook.unsw.edu.au>

2 UNSW Timetable: <http://www.timetable.unsw.edu.au/>

Exam Period: 28 April – 11 May

School managed supplementary exams period:

FOR TERM 1:

- STAGE 1-4* COURSES: WEDNESDAY, 17 MAY 2023 – FRIDAY, 19 MAY 2023
- THERE WILL BE NO SUPPLEMENTARY EXAMINATIONS FOR STAGE 5 STUDENTS IN TERM 1 2023

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 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.

5. Assessment

5.1 Assessment tasks

| Assessment task | Length | Weight | Mark | Due date and time |
|--|---|--------|------|---|
| Assessment 1: Research presentation – one pre group | 5 minute presentation in front of peers, supervisors and others A poster outlining your research project viewed during the day of the research presentation | 15 | 10 | 1 st December 2023 All day event – 9- 4pm |
| Assessment 2a: Literature review | ≤ 20 pages– double spaced, 12 font, including figures, tables and references (50%) | 30 | 100 | 9 th August 2023 – 5pm |
| Assessment 2b: Supervisors report | Assessment by the supervisor on involvement, engagement, contribution, attendance (50%) | | | 22 nd November 2023 – 5pm |
| Assessment 3: Written research report | Generally or <10,000 words. Size of a typical scientific paper in Optometry – such as in the journals Eye & Contact Lens; Contact Lens and Anterior Eye; Clinical and Experimental Optometry. Introduction: 3-4 paragraphs Materials and methods: as needed Results: as needed Discussion: ≤ 3 pages References: as needed Many Projects will require submission of an ethics application to the appropriate ethics committee of UNSW. As this is essential if the Project involves human participants (or animal if appropriate), this application also forms part of this assessment. | 55 | 100 | 17 th November 2023 – 5pm |

| | | | | |
|--|---|--|--|--|
| | If no ethics is required, students will need to complete an online (Moodle) ethics quiz | | | |
|--|---|--|--|--|

Further information

UNSW grading system: <https://student.unsw.edu.au/grades>

UNSW assessment policy: <https://student.unsw.edu.au/assessment>

5.2 Assessment criteria and standards

| Task | Standards |
|-----------------------|---|
| Research presentation | <p>Scientific content of poster and presentation, communication clarity and style, evidence of teamwork, engagement and ability to discuss research presented in the poster.</p> <p>On the day there will be markers of both the presentations and posters – these will usually be members of the School or visiting scientists. Peers will also grade the presentations.</p> |
| Literature review | <p>The literature review will be marked by the supervisor based on:</p> <ul style="list-style-type: none"> • Demonstrated knowledge of topic area – 20% • Content and organisation, coverage of key issues – 20% • Depth and breadth of analysis and discussion – 20% • Correctness and scope of references – 20% • Appropriate style and presentation – 20% |
| Supervisors report | <p>Ability to format and submit on time an ethics application, ability to reply promptly to questions raised by ethics committee (if no ethics is needed – score on the online ethics quiz – scoring at least 70%) – 25%</p> <p>Involvement and engagement in project planning – 10%</p> <p>Contribution to developing research methods – 20%</p> <p>Attendance at project meetings – 10%</p> <p>Contribution to data collection, collation, statistical analysis and writing – 25%</p> <p>Evidence of teamwork – 10%</p> |
| Research report | <p>Organisation, clarity and format of the report in appropriate scientific style - 15%</p> <p>Content of the report, coverage of the main issues - 40%</p> <p>Depth and breadth of discussion of study outcomes - 25%</p> <p>Appropriate use of tables and figures - 10%</p> <p>Correctness and appropriate use of references - 10%</p> |

5.3 Submission of assessment tasks

Assignments should be submitted to supervisors and course convenor via email by 5pm Sydney time on the due date.

Laboratory reports and logs, which should be scanned/photographed, should be submitted to supervisors at the end of the data collection.

Late Submission

UNSW has standard late submission penalties as outlined in the UNSW Assessment Implementation Procedure, with no permitted variation. All late assignments (unless extension or exemption previously agreed) will be penalised by 5% of the maximum mark per day (including Saturday, Sunday and public holidays). For example, if an assessment task is worth 30 marks, then 1.5 marks will be lost per day (5% of 30) for each day it is late. So, if the grade earned is 24/30 and the task is two days late the student receives a grade of $24 - 3 \text{ marks} = 21 \text{ marks}$.

Late submission is capped at 5 days (120 hours). This means that a student cannot submit an assessment more than 5 days (120 hours) after the due date for that assessment.

Special Consideration

If you experience a short-term event beyond your control (exceptional circumstances) that impacts your performance in a particular assessment task, you can apply for Special Considerations.

You must apply for Special Consideration **before** the start of your exam or due date for your assessment, except where your circumstances of illness or misadventure stop you from doing so.

If your circumstances stop you from applying before your exam or assessment due date, you must **apply within 3 working days** of the assessment, or the period covered by your supporting documentation.

More information can be found on the [Special Consideration website](#).

5.4. Feedback on assessment

| Task | Feedback | | |
|-----------------------|-----------------------|--|-------|
| | WHO | WHEN | HOW |
| Research presentation | Course Convenor | Prizes (1 st , 2 nd , 3 rd , and peoples choices) – on the day of the presentation Marks – within two weeks of presentation data | Marks |
| Research report | Project Supervisor(s) | Within two weeks of submission | Marks |
| Literature review | Project Supervisor(s) | Within two weeks of submission | Marks |
| Supervisors report | Project Supervisor(s) | Within two weeks of due date | Marks |

6. Academic integrity, referencing and plagiarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Please use a referencing style in discussion with your supervisor. We recommended using one used in optometry journals such as Optometry and Vision Science, Contact Lens and Anterior Eye, or Clinical and Experimental Optometry

Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage.¹ At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity and **plagiarism** can be located at:

- The Current Students site <https://student.unsw.edu.au/plagiarism>, and
- The ELISE training site <https://subjectguides.library.unsw.edu.au/elise>

The Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>.

7. Readings and resources

Literature on the Research Topic in peer reviewed scientific publications – or elsewhere if needed

8. Administrative matters

Student enquiries should be submitted via student portal <https://portal.insight.unsw.edu.au/web-forms/>

9. Additional support for students

- The Current Students Gateway: <https://student.unsw.edu.au/>

¹ International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.

- Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>
- *Student Wellbeing and Health* <https://www.student.unsw.edu.au/wellbeing>
- UNSW IT Service Centre: <https://www.myit.unsw.edu.au/services/students>
- *UNSW Student Life Hub*: <https://student.unsw.edu.au/hub#main-content>
- *Student Support and Development*: <https://student.unsw.edu.au/support>
- *IT, eLearning and Apps*: <https://student.unsw.edu.au/elearning>
- *Student Support and Success Advisors*: <https://student.unsw.edu.au/advisors>
- *Equitable Learning Services (Formerly Disability Support Unit)*: <https://student.unsw.edu.au/els>
- *Transitioning to Online Learning* <https://www.covid19studyonline.unsw.edu.au/>
- *Guide to Online Study* <https://student.unsw.edu.au/online-study>