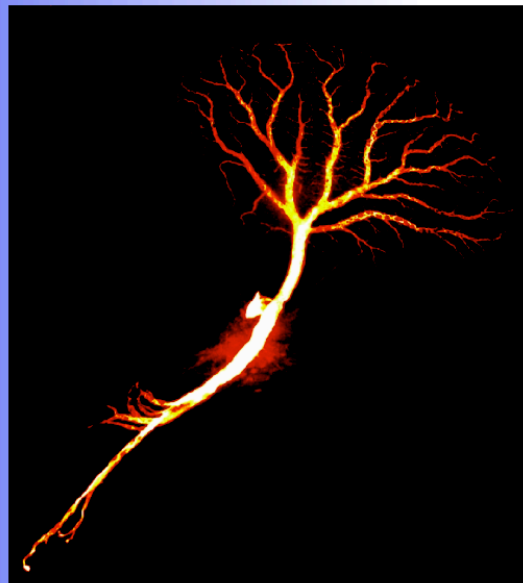




Honours Physiology 2009



School of Molecular and Biomedical Science

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DISCIPLINE OF PHYSIOLOGY
THE SCHOOL OF MOLECULAR AND BIOMEDICAL SCIENCE
HONOURS PROGRAM: AIMS & OBJECTIVES

We are delighted to welcome you into the Honours program in Physiology for 2009. We hope that the coming year will stimulate and challenge you and that the skills you acquire during Honours will remain with you throughout your chosen career. We also hope that the interactions and friendships you have with supervisors, the staff of Physiology, and your peers throughout the year will be enjoyable and long lasting. The Honours Physiology program has an academic coordinator, Dr. David P Wilson. For administrative support you need to see the staff in Physiology Teaching Resource Centre (PTRC), level 4, Medical School South: Jennifer Peters (Academic Programs Officer), or one of her staff.

The aims of the Honours program in Physiology are:

1. To develop the basic skills required for the practice of scientific research.
2. To promote an appreciation of the scientific method and the application of problem solving strategies in science.
3. To enhance the competitiveness of our graduates in obtaining appropriate employment.

Objectives for Honours students are:

- to demonstrate an original and critical approach in the assimilation of the current state of knowledge in a particular area of physiological research
- to appreciate current gaps in our understanding and the future areas for experimental investigation in a particular area of physiological research
- to demonstrate mastery of the basic techniques required for the experimental study of a research question in physiology
- to develop a rigorous, methodical and ethical approach to the maintenance of laboratory records and the collection, storage and analysis of experimental data
- to develop the capacity to identify and evaluate a problem and define the important elements required for its solution
- to communicate scientific information clearly and concisely in written and spoken English

Honours in Physiology 2009: Program structure

Research Project

The core of your Honours program is the research project, which you will carry out with your laboratory supervisor. Most, but not all of the assessment tasks throughout the Honours year are related to your research project and communication of your results. We ask you to prepare a research proposal, which includes a review of the background to your project, to give two research presentations to the discipline (one as a seminar, the other in poster form), to write a thesis (*in the form of a manuscript for a scientific paper*) and then to defend your thesis & experimental approach in an oral examination.

From time to time students may have concerns about their project or particular difficulties (medical, financial or social) may develop which impede your rate of progress. Other students become very concerned when they find that their project work does not progress as expected. *We would like to stress that the assessment of your Honours performance is based on the way in which you carry out your research and present your findings, and not on the results themselves.* We understand that things do not always go as planned. In previous years, many students have achieved very high grades in Honours, even though their project work did not yield data showing significant differences. We will meet with every student in June to discuss their progress and any concerns that have arisen. *In addition, please feel free to discuss any concerns about your rate of progress in your project with your laboratory supervisor or with the Honours Coordinator – David Wilson Telephone 8303 3193 (E-mail david.p.wilson@adelaide.edu.au).*

Honours Workshops

Throughout the year there will be a series of **Research Skills and Professional Development Workshops** that will be held primarily on **Wednesday afternoons** in the Physiology Meeting or Seminar Rooms. These will usually be scheduled before a Physiology research seminar, **attendance is compulsory for students in this program** (see *Seminars* below) so in planning your year, it is necessary to keep Wednesday afternoons free for these events. *Provisional* dates, topics and speakers for workshops are listed below. Although we try to plan these events in advance, all dates are subject to change: Changes will be advised by e-mail you are expected to check you email each day in the event that rescheduling is required. Most of these workshops will focus on defining the nature of the assessment tasks in relation to the overall program objectives. Others are designed to refresh your skills in relation to these tasks and supplement the seminar presentation of PhD students and visiting speakers. There will be an opportunity, however, in the workshops held during the second semester to discuss career strategies and opportunities.

Seminars

An important component of your Honours year are the Seminar series run within the School of Molecular & Biomedical Science, and in other institutions where our externally located students and affiliates work. There are two seminar series within the school which we expect our Honours students to attend regularly: (1) School of Molecular & Biomedical Science seminars will be held infrequently during the year, and will be an opportunity to hear about the research of high-profile Australian and International scientists in the areas represented by the 4 Academic Disciplines within the School (Physiology, Genetics, Biochemistry, and Microbiology & Immunology). They are important school events and it is therefore expected that all students attend. (2) The Discipline of Physiology seminar program comprises guest speakers working in different areas of physiological research in a range of institutions who are invited to present their work during the year. Physiology seminars run on Wednesday afternoons during 1st and second semester, at 4.00 PM in the NUMICO seminar room, 5th floor, Medical School South (attendance at the Physiology seminars is compulsory).

In addition to their academic value, drinks and snacks before or after seminars provide a valuable opportunity for both internal and external members of the School & Discipline to meet on a regular basis. Where possible, we have timed Honours Research Skills and Professional Development Workshops to finish shortly before seminars in the Physiology seminar series (Wednesday afternoons at 4.00 PM), and thus provide a regular opportunity for even externally located students to mix with the remainder of the discipline and the rest of their student cohort. The timetable for School, Physiology and other relevant seminars will be forwarded to you in regular e-mails and in "the School Bulletin".

Because of the enormous value of attending seminars – in broadening your perspective, and in meeting with other staff and students – it is a requirement of our program that you attend the Physiology research seminars within the School of Molecular and Biomedical Science throughout the year. In addition, **All** students are required to attend workshops which are scheduled to precede seminars: Workshops are specifically scheduled to finish in time for the seminar. We require you to document your attendance in a written record, which we ask you to sign upon entering the seminar. It is your responsibility to ensure that your seminar attendance has been documented, if you forget to sign the attendance record email the honours coordinator within 24 hours. We will review your attendance record at the mid-year review and following the oral defence at the end of the year. If we are not satisfied that you have met the requirement for seminar attendance, your grade will reflect this (see assessment).

Communication

The preferred mode of communication of information and notices to Honours students is by e-mail. Updated material will be made available for download from MyUni and students will also use it extensively for submitting assessed material on-line. All students will be issued with a MyUni account and assistance is available (please see the PTRC staff) for students who are not familiar with this system. **Please note:** You are required to send your assessment task submissions to us via the Digital Drop Box in MyUni. All students will be also issued with a student email address by the University, which the Discipline will use for general communication with you. Because of the difficulty of confirming receipt, **we consider that you have received our communication when we send e-mail to you.** It is by this mechanism that we will inform you of changes to schedules and other important information. **It is your responsibility to check your email and MyUni accounts on a daily basis.**

E-mail forwarding: Students working outside of the discipline may wish to have their e-mail messages automatically forwarded to another address. This can be arranged from any computer with internet access, by logging in to your account via the Webmail interface: <http://webmail.adelaide.edu.au> and then clicking on the "Account manager" button in the toolbar. The click the link to the "Forwards" function, and follow the instructions to forward your e-mail to the account that you wish to access your mail from. Remember that ALL mail sent to your @student.adelaide.edu.au account will then be forwarded to the account you name, so it is your responsibility to ensure that there is sufficient space in that account to receive e-mail from us and that you check it regularly. If there are any problems, please contact Jennifer Peters or staff in the PTRC.

IT support

The School now receives centralised IT support via the University IT Services (ITS). Help is available by phoning the ITS Helpdesk on 8303 3000 during working hours. Note that Support is limited to issues with accounts and University-owned computer software and hardware. Nevertheless, it is possible to use personal computers on the University network and at home. A wireless secure LAN connection is available to all members of the University with a valid e-mail account, for use with personal computers within the University. Reception is possible within various areas on campus. The University account also provides access from home (presently via 56K modem connection) for the

cost of a local phone call. Every student has access to a web-mail client for use anywhere in the world (see <http://webmail.adelaide.edu.au/>).

*We cannot stress enough how important it is to **back up your data and written work regularly**.* All students are provided with a minimum of 250Mb secure storage space on the University server. While this does not seem a vast amount, this provides a very secure way to back up critical documents and data (it is backed up daily). Access is now available to clients at home and off-campus via a new 'Remote Files' tool provided by ITS. Information on accessing files this way can be found via the University Web Mail client login page here: <https://webmail.adelaide.edu.au/horde/imp/> . For students located in on-campus labs, standard University of Adelaide computers provide automatic access to the secure file stores (usually via an "S" drive mapping).

If your laboratory is located outside the Medical School building, your local institution (e.g., TQEH, WCH, RAH) may provide alternative computing facilities and support services. Although these may be more convenient and potentially superior to the services available within the University, our ability to assist you with them is limited. It is therefore your responsibility to discuss your needs with your supervisor and ensure that you have access to facilities that support the demands of your specific project. You are strongly encouraged to investigate the facilities available early in the year and establish a means for moving very large documents (e.g., seminar presentations) from the computer on which they are created to one that we have access to. In most cases a web connection is all that you will require (allowing you to submit work to the Digital dropbox on MyUni). Please ensure that you have worked through these problems early in the year – we have had problems in the past with students who find themselves unable to transfer very large documents at the deadline for assessments, causing unnecessary stress for everyone.

Assessment in the Honours Program 2009

In the course of this year, you will complete a number of different assessment tasks, which have been designed to test how well you are achieving the objectives of the Honours program (page 1). You will also receive feedback on your performance from a range of assessors throughout the year. It is a policy in Physiology that supervisors are not involved in the allocation of assessors to their own students, nor do they have access to the information that would indicate their students' overall placing in the class.

There are a number of assessment components in Honours and the weighting of each assessment will be as follows:

Draft Synopsis	0% [formative assessment only]
Honours Research Seminar & Synopsis	15%
Research Proposal	0% [formative assessment only]
Physiology Honours Poster Symposium	15%
Critique of Scientific Paper	10%
Supervisor Assessment	10% [5+5 in two parts]
Thesis Draft	0% [formative assessment only]
Thesis	25%
Oral Examination	20%
Seminar/Workshop Attendance Record	5%
TOTAL	100%

Performance criteria, copies of the assessment criteria and other information provided to assessors will be made available on MyUni in advance of the due date for each task. Assessors will be asked to allocate grades against the following Honours levels (as set by the University) (marks out of 100 for each task):

First Upper	= 90+
First Lower	= 80 - 90
IIA Upper	= 75 - 80
IIA Lower	= 70 - 75
IIB	= 60 - 70
Third	= 50 - 60
Fail	= below 50

As can be seen from the information above, there are a number of formatively assessed components to the course. These include the *Draft Synopsis*, *Research Proposal* and *Draft Thesis* submission. While these components do not form part of the overall assessment, they are, nevertheless compulsory elements of the Honours program. If they are not completed satisfactorily, your Honours grade will be withheld.

Information about the format & content for each task is described below.

Oral communication skills: The Honours Research Seminar & Honours Symposium

During the course of the year, each student will formally present their research project to a general audience in two ways: a short seminar presented to the whole discipline, and a poster presentation at an all-day symposium organised along the lines of a typical conference. The seminar and poster presentations are both assessed by a panel comprising 3 examiners. The grade for each task will be the mean of these assessments. The assessment criteria for the first seminar are provided at the end of this document and should provide some insight into this process. The assessment criteria for the Symposium will be available 3 prior to the Symposium date.

Honours Research Seminar and Project Synopsis (15% of final mark)

At the *Honours research seminar*, scheduled for mid-April, students will present their project orally, using a data projector and PowerPoint (or similar) software. All members of the Discipline and supervisors are invited to attend and all Honours students are expected to attend all seminar sessions. Seminars will be presented in a series of 2-hour sessions, with talks in each session grouped into broad subject areas. The presentation should provide an insight into the research question that is the focus of your Honours year. It should include the background to this question, a clear statement of the aims and experimental approach, and initial results or other supporting material. This seminar is scheduled early enough in the year that you can use the feedback from it to amend weaknesses highlighted in your approach to communicating your work in time for incorporation into your Research Proposal, written thesis and the symposium, yet late enough that you should have a clear idea of the project that you are undertaking and be able to answer questions about your experimental approach. Regardless of the progress with obtaining results at this early stage, students should endeavour to address current controversies in their area, and to give the audience some insight into the main schools of thought etc..., as presented in the literature. You are allocated a maximum of 15 minutes for the seminar. You should aim to talk for 8-10 minutes, leaving 3-5 minutes for questions. The seminar is allocated 5% of the total mark for the year. In addition to acquiring experience with the oral presentation format, it will provide valuable feedback to help you develop your scientific communication skills.

A copy of the performance criteria, assessment criteria and other information provided to assessors for this task is provided at the end of this manual.

To enable us to assemble the Honours presentations on the laptop computer and to avoid last minute panics on the morning of your presentation, **you are required to electronically submit your PowerPoint presentation via MyUni by 12 pm two days before your seminar (i.e., by April 17)**. Due to the number of students and the need to coordinate all seminars to run to a very tight schedule, there will be no exceptions to this requirement. MyUni can transfer much larger files than e-mail, hence it is the preferred mode of submission. You may also submit your presentation directly at the PTRC on USB drive or CD. **IMPORTANT:** Please note that the University enforces strict standards for computer software on University-owned computers, including the laptops on which your presentation will be loaded. While we use an up-to-date version of Microsoft Powerpoint for presentations, we cannot guarantee that it will be as up-to-date as your own home PC or that our PC will include plugins or other support for any non-standard animations or other embellishments you might add to your presentation, especially if it was prepared on a different operating system (e.g. Linux or Mac OS X). Strange things can and DO happen when you transfer PowerPoint files from one computer to another. Fonts change, graphics sometimes don't work etc...

For these reasons, if your presentation is graphics intensive or requires special effects or animation, we **strongly** encourage you to check that any graphics or special effects that you use still work when transferred onto the PTRC laptop and to allow sufficient time for troubleshooting ahead of your

seminar (i.e., at least 24 hours before the due date/time). We realise that this is frustrating for those of you who wish to use the latest software, but we are happy to do our best to accommodate your needs – **provided you give us adequate notice!** If your presentation requires special graphics or animations that you suspect will be troublesome, we strongly encourage you to discuss the issues this raises with the PTRC staff or David P Wilson well in advance of your presentation and we will do our best to resolve technical issues. Please do not leave this to the last minute – it is upsetting if your seminar presentation does not go as planned due to software issues. Nevertheless, we see these problems every year, and indeed at every Scientific conference that we attend.

Physiology Honours Symposium (poster presentations) (15% of final mark)

At the *Physiology Honours Symposium* in September, students will present the results of their research project as a poster, in the same way that is common at National and International conferences. The symposium lasts for a single day and consists of two 2-hour formal poster sessions, and a 2-hour (lunch time) general session to which the entire Discipline and affiliates are invited. All Honours students must attend all day.

Poster presentation sessions: During your poster session, you will be allocated a time-slot during which you will formally present your poster to attendees at your session, including assessors. Referring to your poster, you will provide a 10-minute oral overview of your main research findings and how your work has contributed to a greater understanding of the research area, and will then answer questions addressing the poster content for a further 3-5 minutes. In most respects, this presentation is similar to presentation of a short Research seminar, but remember that you are limited by the size, clarity and number of graphical aids on your poster.

Peer assessment: Peer-review is the primary means by which the quality of work submitted for publication (or grants to fund further research) is determined. While we don't always agree with everything that our reviewers say, feedback from peer-reviewers may often lead us to re-evaluate our approach and think about the research question in a different light. To encourage you to develop your skills as a peer-reviewer, we ask you to provide written feedback for 2 posters unrelated to your own research topic. By the end of the day you will complete a brief report on the posters you assess and brief written feedback for the poster author on comment sheets that will be provided. Your comments will be returned to the author anonymously. Peer feedback is formative only, and will not constitute part of the assessment for the poster. However, each student *is* asked to select a shortlist of 3 posters from any of the posters visited during the General Session (see below) for a 'students choice' prize, that will be announced during refreshments at the end of the day.

General session: The general session consists of two 25-minute blocks (one for even and one for odd numbered posters) during the lunch break (lunch and refreshments will be provided). During your block (odd or even poster number) you need to stand at your poster and be prepared to answer questions posed to you by anyone attending the session. Experienced assessors will use the general session to independently judge the best poster. The award-winner, and the 'Students Choice' prize will be announced at drinks for all attendees at the end of the day.

The poster & poster-presentation are worth a total 15% of the final mark.

Please note that the art of giving oral presentations and the construction and defence of a good poster will be the focus of two Research Skills Workshops, scheduled a few weeks before each presentation.

Poster production: Poster production is a common activity in most Research laboratories. If you are lucky, your supervisor may ask you to produce a poster to present at a local, National or even International conference during the year. Your home laboratory is likely to have a preferred style and format for posters, and the software used to produce these varies widely. **All posters will be printed externally, with your lab paying for the printing (supervisors are provided with funds by the school to partially offset the expenses associated with honours student projects).**

Poster submission: You are required to submit **both the completed poster and three (3) A3-sized copies by the deadline**. You may laminate your poster if you wish. We will provide specific guidelines for the required size and style of the poster at the scheduled poster workshop.

Scientific Writing / Interpretation Skills: Synopsis, Proposal, Critique & Thesis

We have designed both formative and summative assessment tasks throughout the year that test your ability to define scientific questions, assimilate and interpret background literature and other material and prepare written reports of your work, in a format that is common to most scientists working within the Biomedical Sciences. Each of the tasks is scheduled in a progressive way, to build skills in each of these areas and culminating in the submission of your final thesis, in the form of a scientific manuscript typical of those submitted to peer-reviewed journals. While most of these tasks are related directly to your own research project, we also include a task (the Critique exam) where you will be asked to interpret the work of other scientists. Each of these tasks are described in detail below. Those that constitute a component of your final grade for the year are each supported by a Research skills workshop (2 in the case of the thesis) to help you to better understand what is involved.

Brief Research Synopsis (assessed together with 1st seminar, as described above)

Each student will prepare a brief Research Synopsis with the following format and content: Background, Hypotheses and Aims, Research Plan, Significance and outcomes (maximum of 800 words plus not including references). To this you should add an expected timetable of experiments, analyses, statistical analysis and thesis preparation (up to two pages, format optional – discuss with your supervisor). You will submit 2 versions of the synopsis. An initial rough draft of this synopsis and timetable must be submitted to the digital Dropbox on MyUni by the due date specified, but you should also print a copy for your supervisor and submit it to them directly. Your synopsis will be reviewed by your supervisor and formative feedback will then be given. This will enable you to evaluate your progress with developing clear aims and hypotheses for the project as well as defining these in the context of key literature. Defining your project formally at this early point in the year will also help you to develop the structure of your research seminar, with the benefit of feedback from your supervisor.

The final version of the synopsis should take account of the feedback from your supervisor and is due 2 days before the research seminar. A workshop will be provided to help you develop your synopsis and seminar presentation.

In addition to informing the seminar assessors of the aims and objectives of your project, the synopsis and timetable allow you to set milestones for the coming year, and should assist you in planning and executing your experiments within the time available. While we fully expect changes in your timetable as the year unfolds, progress against the expected timetable outlined within the synopsis will be reviewed mid-course with the Honours Co-coordinator to help you make best use of the remaining time available to you.

The Research Proposal (formative assessment only)

Each student will prepare a research proposal, which includes a detailed and critical review of the area of the research project, which should begin with a summary and finish with a brief description of the research strategy and significance of the project. One of the aims of this process is to get you thinking about the introductory parts of your thesis at the start of the year. You will have ample opportunity to revise what you have written for your final thesis, but the overall length, detail and approach for the Research Proposal are similar to those expected for the Introduction of the Final thesis. The due date for this proposal is several weeks after the 1st seminar, so you will have ample opportunity to address questions raised at that time and to incorporate feedback received.

While the Honours coordinator will check your submissions to ensure that you have completed the proposal as specified, it will not be summatively assessed. Instead, a copy is provided to your supervisor for expert feedback, as they are in the best position to judge the degree to which your proposal summarizes the key background literature in the specific field of your project. In addition, we ask you to 'self-assess' your own proposal against criteria similar to those that we will use to

judge your thesis later in the year. This will encourage you to treat your own writing critically. We provide a workshop to help develop your research proposal and to explain the self-assessment process.

Briefly, the format and content is to be as follows:

A cover page headed Physiology Honours Research Proposal and containing the Project title, students name, supervisor's name(s) and laboratory. The title should communicate the main question to be addressed by the research project and be no longer than 120 characters, including spaces.

Introduction: An introductory paragraph (approximately 200 words) should state the broad context, briefly describes the key research findings and/or gaps in understanding that lead to the hypotheses to be tested, states these hypotheses and the specific aims by which this will be done. The reader should get a general idea of the scope of the project, the general hypotheses to be tested and their scientific rationale, and the logic of the research strategy involved. (This paragraph will form the basis for developing the Abstract to your thesis later).

Project Background (maximum of 1200 words): This should describe the background to the research proposal by developing the scientific rationale for the project: critically evaluate existing knowledge and especially identify the gaps, which the project is intended to fill. State the hypotheses and specific aims by which these will be tested.

The reader of the background should be able to understand the goals of the project and its importance, the scientific basis and justification for the study, the hypotheses to be tested and the tests to be used. The reader should clearly understand the origin of the research hypotheses and aims and their significance.

Research Strategy (maximum of 400 words): Should Follow the Project Background, and should outline the experiments designed to test the specific hypotheses. There should be appropriate descriptions of key methodology to the extent allowed by the size limit.

The reader should be able to understand clearly how the proposed experiments relate to and will test the hypotheses.

Significance and Outcomes (maximum of 200 words): The Research Proposal should conclude with a statement describing concisely the importance of the research by relating the specific aims to the broad, long-term objectives. This should clearly articulate the significance of the research and the project's outcomes.

The overall length of the Research proposal must be no more than 2000 words (all sections, excluding the reference list at the end of the paper). You can check the length using MS Word. Note that all references, footnotes, units etc. "within the main text" count towards the word limit.

Critique of a Scientific Manuscript (10% of final mark)

During your Honours year, you are expected to gain skills and experience in the critical assimilation of the scientific literature and in the art of presenting complex scientific information in a clear and understandable written form. In August we will ask you to demonstrate your ability to read and assimilate a published paper from outside your area of research, to answer a series of questions on the experimental design, data presentation and interpretation and to write a scientific abstract for the manuscript. This assessment will be held as a closed-book style of examination. The selected paper and questions are designed to minimise the advantage to students working within specific areas.

Please note that the critique of a scientific manuscript will form the basis of one of the Research Skills Workshops. Examples of the Critique papers and questions used between 2002 and 2007 have been collated and will be available from the PTRC and posted on MyUni well ahead of the exam.

The Thesis (25% of final mark)

Each student will prepare a written thesis describing her or his research. The thesis *must* be written in the form of a manuscript to be submitted for a scientific journal. We will provide a modified form of the "Instructions to Authors" based on one taken from a typical Physiology Journal. Note that you must stick *rigidly* to these "Instructions to Authors", as you are required to do when preparing a scientific manuscript for publication. If the specific nature of the research undertaken requires a deviation from these instructions, you must contact the Honours coordinator for permission to do so no later than 1 week before the final thesis is due. Further details will be provided in the second thesis workshop, ahead of the due date. The "Instructions to authors" document will be available for download from MyUni later in the year.

The thesis must be prepared on a word processor to enable submission via MyUni electronically. The thesis must be typed *double-spaced*, formatted for A4 paper, using the electronic template, which will be provided.

While traditional manuscripts had figures listed on separate pages at the end, this makes reading difficult and many journals now permit (or require) figures and tables to be inserted into the text for clarity. For similar reasons, we now require that figures and tables are either embedded within the text, or inserted as additional pages between the text pages, complete with an appropriate legend. The thesis will begin with an Abstract with a maximum of 250 words. The word count for the remainder of the thesis should not exceed 4000 words. This limit applies to the text, figure legends (but not text within figures or tables) and any citations of references to published articles embedded within the text. The limit does not apply to Acknowledgements or the list of References at the end of the article. These limits will be strictly enforced, with penalties to apply as follows:

0-10% over the limit:	-5% of the maximum mark for the assignment
10-20% over the limit:	-15% of the maximum mark for the assignment
>20% over the limit:	thesis not accepted for assessment

These penalties will apply to the average grade provided by assessors.

Follow the "Instructions to Authors" when deciding the page layout of the thesis. That is, follow the recommendations regarding margin sizes, font size, number of lines per page etc. You can use your word processor to calculate the number of words in your document if you are unsure of the length. **Important note:** The word count tool available in Microsoft Word allows you to keep track of the number of words in your document as you work on it, but DOES NOT COUNT words within text boxes. If you use textboxes (e.g. for legends to figures or tables) you must ensure that you have made allowance for the number of words in those boxes or you may be inadvertently over the word limit. We **will** count the words in those boxes!

Other assessment components:**Supervisors Assessment & Laboratory Performance (10% of final mark)**

Laboratory supervisors will assess the laboratory work of each student in her or his laboratory. This assessment will focus on the mastery of techniques by the student and the diligence and commitment of the student to quality control in the laboratory. The supervisor will also assess the student's development as an independent and critical scientist, & their ability to manage their time. Laboratory performance assessment will be carried out at the end of the second semester. A draft version of the assessment criteria which will be used are included at the end of this document. The supervisor assessment is provided in two parts, at the end of each semester, each worth 5%.

Oral Examination (20% of final mark)

This examination provides the examiners who have read and assessed your thesis the opportunity to probe your understanding of any aspect of your project. Whilst the oral may deal with matters arising directly from the thesis it may also cover more general aspects of the physiology, which provide the background for the project. The oral examination is 20 minutes in duration. This examination is held approximately two weeks after the submission of the thesis. A timetable with specific exam times for each student will be circulated closer to the date.

Assessment criteria for the Oral Examination: There will be a workshop held on how to prepare for the Oral Examination. The format of the examination is similar for each student: You will be introduced to the 3 examiners at the commencement of the exam and they will then ask questions for the remaining time. An independent moderator (in most cases this will be the Honours Coordinator) will be present to keep time and ensure that each examiner has an adequate chance to ask questions. The specific nature of the questions is quite variable and for this reason we do not use a formal set of assessment criteria for this task. There will be a workshop held on how to prepare for the Oral Examination, which will provide examples of the kinds of questions likely to be asked.

THESIS SUBMISSION

Thesis submission (i.e. of your final thesis, as it is to be assessed) is a 3-stage process. (1) You submit a draft copy of your thesis to the PTRC by the due date and we then pass these on to your supervisor for feedback. (2) Taking into account feedback provided by your supervisor you then submit an unbound copy of your thesis to us for assessment, by the due date. This is then assessed by 3 assessors who will determine your grade for this task. (3) Following your oral examination, you will be informed whether the examiners require any changes to the thesis. You undertake corrections as specified (if any), print the thesis and have it professionally bound before submission before the due date specified. Until we receive your bound thesis, you have not completed the Honours program.

Further details for each of these 3 stages are provided below.

Deadlines for submission:

Draft Thesis: The draft thesis must be submitted electronically via MyUni, by 12.00pm (mid-day), 30 September 2009. Submission of the draft by this date is a requirement for satisfactory completion of Honours in Physiology. Note that the supervisor assessment is based partly on the draft thesis, so that late or incomplete submission of the draft may also affect your final grade.

Final Thesis (for assessment): The final thesis must be submitted electronically via MyUni and followed up with one printed-paper copy of the thesis to be submitted to the PTRC, by 12.00pm (midday), Wednesday 21 October 2009. Late submission will incur a penalty of 10% of the maximum mark for the assignment per day or part day. The electronic copy and printed copy must be identical. If the electronic copy is too large to be uploaded to MyUni, it can be brought to the PTRC on CD at the same time as the paper copy. Where colour illustrations (including fluorescence micrographs etc.) are used, the hard copy provided by the deadline may be printed black and white, but an additional 3 printed copies in colour must be submitted to the PTRC within 24 hours of the thesis deadline (i.e., by 12 PM on Thursday 22 October, 2009). Failure to do so will result in black and white copies being presented to assessors.

Bound Copies (with corrections): The assessed copy of your thesis is considered to be a draft until any corrections as directed by the Honours Coordinator (based on assessment by the examiners). Examiners may require very minor changes to the thesis, in which case these will be communicated to you shortly after your oral examination (usually via e-mail). Once minor changes required by the examiners have been made to the satisfaction of the Supervisor, the final thesis can be printed and two bound copies submitted to the PTRC. The final deadline for this submission will be the close of business on Monday November 23, 2009.

Upon receipt of bound copies, students will be given a letter advising the final grade for the Honours program. All students will be asked to complete an exit form and return any building keys (internally located students) before grades will be released. If final copies and completed exit form/keys (where applicable) are not received by this date, students will receive a grade of Incomplete Fail for the Honours program.

Policy on Reading of Thesis Drafts

There is much confusion every year over this point, so please read this document carefully and ensure that you discuss it with your supervisor early in the year!

The thesis is the student's own original work and will be assessed. For this reason, and with the noted exception of the draft thesis submission described below, **supervisors, potential examiners or other senior academic or research staff (including post-docs and PhD students) must not read drafts of theses.** They will, however, be able to give general guidance and answer direct questions: For example, you can print copies of graphs, tables or other data and discuss its

significance, approaches to interpretation and style of presentation with your supervisor, post-docs, senior PhD students or any other senior staff in your research laboratory at any time of the year. In enforcing this rule, it is not our intention to deny you access to your supervisor for advice during the later stages of thesis writing, but **we need to be very clear that the work we assess must be your own writing**. During the thesis preparation workshops, you will be provided with specific examples of what is/not reasonable with respect to seeking assistance from supervisors. Students may ask people other than those listed above (for example other honours students in the laboratory, friends, etc.) to read drafts and to offer general suggestions in relation to clarity etc. If in any doubt, please consult the Honours Coordinator (David P Wilson) for advice. Students for whom English is a second language should consult the Honours Coordinator for additional guidance in how to seek assistance with written English, if required.

(1) Draft Thesis Submission:

Although the thesis is to be the student's own original work, we appreciate the need for expert guidance in preparation of materials for submission, and in interpretation of data. In most cases the Supervisor will be the most appropriate person to provide this guidance. For this reason, students are to submit a single draft copy of their thesis *no later* than 1 month before the final deadline (see dates below) via the Digital Dropbox on MyUni and one **printed** copy to your supervisor for comments. **You must not provide your supervisor with an electronic copy of drafts of any written work at any time**. If your supervisor is away at the time of the draft thesis submission, you can either discuss an alternative thesis reader with us, or an alternative means for getting a copy to your supervisor for comments. Your supervisors can either annotate their printed copy with comments, or provide comments to you by e-mail. They may then meet with you to discuss and explain their comments but must also provide a copy of the annotated thesis (or e-mailed comments) to the Honours coordinator or PTRC staff. This process is designed to ensure that feedback is provided **once only** and under the scrutiny of the Honours program. For this reason students **MUST NOT** print copies of further thesis drafts directly for their supervisors.

To take maximum advantage of this opportunity, you need to ensure that your thesis is well developed by the time of draft submission. The draft thesis need not be complete, but ought to be sufficiently developed in outline to allow assessment of the approach that will be taken in presenting logical arguments relating to the thesis topic. In particular, students are strongly encouraged to provide figures describing their key results and their interpretation of the results, including statistical analysis.

The **one named supervisor** for the student will be asked to provide **feedback within 1 week of draft submission**. If the Supervisor is unable to provide this feedback in the timeframe required, they must arrange for, and nominate an alternative reader, by agreement with the Honours Coordinator. After the formal draft revision process, students are **NOT PERMITTED** to discuss further thesis drafts with their supervisor or any other senior lab personnel, including postdoctoral researchers and PhD students. If the student has further questions, or if a statement made in the feedback is unclear, they must direct their query to the Honours Coordinator in the first instance. The draft thesis is not assessed formally, but the degree to which you organise your time and approach to take maximum advantage of this opportunity will form part of the basis for the supervisor's assessment, particularly in relation to time management.

The appropriate format and content of the thesis will be the focus of Research Skills Workshops in June and August.

(2) Submission of the assessed version of the Thesis:

The thesis must be submitted electronically via MyUni and followed up with one signed, printed-paper copy of the thesis to be submitted to the PTRC, by 12.00pm (midday), Wednesday 28 October 2009. Late submission will incur a penalty of 10% of the maximum mark for the assignment per day or part day. The electronic copy and printed copy must be identical. If the electronic copy is too large to be uploaded to MyUni, it can be brought to the PTRC on CD or USB drive at the same time as the paper

copy. Where colour illustrations (including fluorescence micrographs) are used, three printed copies must be provided. Failure to do so will result in black and white copies being presented to assessors.

After the oral examination the student is asked to correct and submit two bound copies of the final version of the thesis according to instructions provided below.

(3) Submission of the bound (final) Version of the Thesis:

Two bound copies of the final corrected version of your Honours thesis must be received by the Discipline before you can receive any notification of your final Honours mark from the Discipline. The following guidelines should be adhered to when correcting and submitting your thesis.

Thesis corrections

1. The assessed copy of your thesis is considered to be a draft until corrected as directed by the Honours Coordinator (in the light of the assessment by the examiners). Examiners may require very minor changes to the thesis, in which case these will be communicated to you shortly after your oral examination.
2. Students may also be advised to pick up one or more of the three draft versions of their thesis which were read by their assessors from the Discipline Office. Whilst the assessors have annotated these draft versions, students are only required to make the corrections to the thesis identified on the List. It is also important to note that students may **only** make the following corrections to their thesis:
 - (a) the essential corrections identified on the List
 - (b) corrections of minor typographical or numerical errors which were not identified by their assessors. If in any doubt as to whether the error is trivial enough that it can be corrected, please consult the Honours coordinator (David P Wilson)

Students must not undertake major revisions of their theses beyond these corrections. It is important to remember that the annotations made by assessors on the draft theses are often prompts or cues for questions to be addressed during the Oral Defence, and as such were intended only for the assessor themselves to refer to during that exam, and not to the student. Whilst some of these annotations may be helpful in the context of preparing a scientific manuscript, students may **not** revise their theses in light of these comments beyond those corrections identified on the List.

3. Students are asked **not** to approach any of their assessors for further clarification of points written in the draft theses or raised during the oral examination. Points considered to be important have been raised by the assessors in the Oral Defence. If you disagree with any of the points raised or wish to question the examination process we ask that you direct your enquiry to your supervisor.
4. Once minor changes required by the examiners have been made to the thesis to the satisfaction of the Supervisor, the final thesis can be printed and two bound copies submitted to the PTRC, together with an electronic copy on CD.

Final Bound Thesis: additional requirements:

1. The **final deadline** for this submission will be the close of business on Monday November 26, 2009. Upon receipt of bound copies at the PTRC, students will be given a letter advising the final grade for the Honours program. All students will be asked to complete an exit form and return any building keys (internally located students) before grades will be released. If final copies and completed exit form/keys (where applicable) are not received by this date, a grade of *Withheld* will be recorded for the Honours program and entered onto your transcript. This can subsequently be amended if these requirements are met, but note that the lead-time required will mean that paperwork will not be processed in time for you to graduate at the graduation ceremony, and will delay your allocation of a position on the order of merit (i.e. for PhD scholarship application).
2. All theses should be bound professionally in a hard cover and colour chosen by the student. The spine of the thesis should contain the following information, preferably in gold:

Name of Student (in style preferred by student) and Title of Thesis

3. A minimum of four copies of the thesis are expected to be bound - two of these are submitted to the School (one for the Barr Smith Library and one for the Discipline's Thesis Library). A third is normally provided for the supervisor, and you should retain at least one bound copy for your own use.
4. All theses should contain the following information on the first page:

TITLE OF THESIS

A thesis submitted in partial fulfilment of the

HONOURS DEGREE of BACHELOR OF SCIENCE

In

The School of Molecular and Biomedical Sciences
The University of Adelaide

by

Name of Student
October 2009

5. All theses should contain the following Declaration on the next page:

I declare that this thesis is a record of original work and contains no material which has been accepted for the award of any other degree or diploma in any university. To the best of my knowledge and belief, this thesis contains no material previously published or written by another person, except where due reference is made in the text.

6. The statement should be signed (in all copies) over a typed version of your name and dated October 2009.
7. The two bound theses are submitted to the School through the PTRC.

Please do not hesitate to contact the Honours Coordinator if there are any difficulties or queries relating to the correction and submission of your thesis.

Final Meeting of the Honours Examiners

At the completion of the Oral examinations, the Honours examiners will meet to review the overall rankings, which are based on the assessments for the year and provided without student identification, shortly after the Oral Examination. At this meeting, all aspects of performance are considered, particularly those related to substantive tasks, to determine grades on the following scale:

Honours Grades

The gradings at the end of the year will be:

HONOURS:	First Class
	Second Class Division A
	Second Class Division B
	Third Class
	Fail

There are no quotas for a particular grading. Rather, a level of overall achievement is assessed according to the criteria described throughout this manual or advertised on MyUni at least 3 weeks before each assessment task.

Our selection criteria for Honours require a high level of Academic achievement or other evidence of potential to handle the rigours of the Honours year. We are proud of a program structure and workshops that support our students in achieving their goals. We therefore expect that the majority of students who we accept for Honours will be capable of achieving at least Second Class Division A. Students achieving this high standard and wishing to pursue a PhD program by Research within our School stand a good chance of winning Scholarship support for their proposed future work. Whilst the number of scholarships available varies from year to year which makes it difficult to predict or guarantee scholarship support, most Second Class Division A applicants to our School in 2004-2009 were offered scholarships. A Second Class Division A award is thus an excellent achievement and requires you to perform at a consistent, very high standard, judged at an Honours level rather than at an undergraduate standard. Second Class Division B will be awarded to students who perform well but show weakness in some area(s).

In the past, some students who have worked consistently well have been disappointed when they were not awarded First Class Honours. This grading is reserved for excellent to exceptional students who show a consistent first class understanding of their subject area, well-developed skills in scientific communication, and a high degree of initiative and originality, in addition to the characteristics that would win a Second Class Division A award.

The Physiology Honours Prize & Awards Dinner

The top-ranked Honours student in Physiology each year is awarded a prize at an Award Dinner held for all members of the School of Molecular & Biomedical Science. Physiology Undergraduate, Honours & Postgraduate students are all welcome, along with their supervisors and staff, with family and friends welcome. Awards and prizes for Honours students and others are announced at the dinner, which is held in late November/ early December.

Details of venue and time will be pre-circulated.

Resources available to Honours Students in Physiology

All Honours students, whether internally or externally located, have full access to infrastructure and support staff in Physiology.

Software

As students in this discipline, you are also entitled to access to the following licensed software (please see the PTRC, S420, Level 4, South Wing Medical School for details):

- MyUni, for program materials, relevant web sites, communications regarding the Honours year, Discussion groups, Calendar and To Do lists and more. Students will have their own account created by the PTRC and this is available from most computers with web access.
- End-Note for PCs, for establishing your reference database (always wise to do from the beginning!) (free)
- SPSS/SigmaPlot for PCs, for statistical analysis (at University site licence cost, presently under review, which would normally be paid by your supervisor).
- GraphPad Prism (PC): a straightforward package for data analysis and graphing, available on many School computers via a concurrent License server. *Now also available for installation on home or privately owned computers at no cost.*
- Adobe Photoshop, Adobe Illustrator & Adobe Acrobat: This software can be provided via concurrent licences maintained on the school server. They can be installed on any new and many existing School-owned computers upon request to IT Services. In general, these software packages will be available for use by any students within the school, although a limited number of licences will be available at any one time. Details will be provided upon request.

Honours Physiology Seminars: using PowerPoint for Presentations

The Discipline of Physiology uses Microsoft PowerPoint on all staff/laboratory computers, School laptops and in the computing suite. Unfortunately, the University IT 'standards' enforce an ancient operating system upon most University-owned PCs (i.e. Windows XP or Vista). The old versions of PowerPoint on these PCs will read all earlier versions but may not support all features available on later versions of the Office software suite. A later version is available on the laptops, but beware that in general, University 'standard' software configurations are often more primitive and antiquated than on your personal or home computer. You need to test all presentations on our hardware ahead of your presentation to try and work round issues that arise. We are always happy to help troubleshoot such problems *but we do not let use your own laptop for seminar presentations.*

Training

We do hold a workshop to help you structure your presentation appropriately (we will provide a further workshop on Poster preparation at which we will provide tips on how to structure your presentation of the poster later in the year). The workshop is not intended to provide training in how to use PowerPoint, although we will provide a few key tips. By now most of you will probably be sufficiently familiar with PowerPoint that a specific workshop would be superfluous. To help you in preparing your presentation, the PTRC has collected a few tips in "Getting Started with Microsoft PowerPoint 2000", which is available on request at the PTRC. Please feel free to ask the PTRC staff or the Honours Coordinator about any of the technical issues with digital image manipulation etc. or how to import data into Powerpoint. There is usually no need for you to end up presenting fuzzy or illegible graphs or figures!

Equipment

A digital camera is also available to take photographs of experimental set-ups etc. Similarly we have a Digital video camera and software set-up for producing Movies that can be embedded into presentations. See the PTRC for access and further information.

Book the scanner with the PTRC who will show you how to scan photographs, pictures, transparencies and radiographs. To avoid slowing your presentation down with a large file, a good tip is to make your scan file no larger than 1024 pixels for a full screen slide or less for a smaller picture.

Rehearsals

Two laptop computers and several portable data projectors will be available within the School for rehearsals in the weeks prior to your seminar. Please contact the PTRC to make a booking if you would like to take advantage of this opportunity, or enquire at the School office (Molecular Life Sciences building). The seminar room on level 5 of the Medical School is also available for rehearsals, by arrangement with the Honours coordinator or PTRC staff. If you wish to take advantage of these opportunities, please plan early.

Prior to Seminars

To enable us to assemble the Honours presentations on the laptop computer and to avoid last minute panics on the morning of your presentation, **you are required to electronically submit your PowerPoint presentation via MyUni by 12 PM the day before your seminar.** MyUni can transfer much larger files than e-mail; hence it is the preferred mode of submission. If you have any problems uploading your file, you may also bring it to the PTRC on CD or USB-Flash drive PRIOR to the submission deadline. In previous years, students have ignored this requirement and turned up on the day with presentations on disk. Due to the large number of students and the need to coordinate seminars to run smoothly on a tight timetable there will be no exceptions to this requirement.

Honours Coordinator, Physiology

David P Wilson

THE UNIVERSITY OF ADELAIDE

HONOURS IN PHYSIOLOGY 2009

Staff Contact Details

Honours Coordinator

Dr. David P Wilson

S523, Level 5 Medical School South,
Telephone: 8303 3193
Email: david.p.wilson@adelaide.edu.au

PTRC staff:

Jennifer Peters

PTRC, Academic Programs Officer, S420,
Level 4, South Wing Medical School
Phone: 8303 3194 or 8303 7017
E-mail: jennifer.peters@adelaide.edu.au

Catherine Hillier

PTRC, S420, Level 4, South Wing Medical School
Phone: 08 8303 4732
E-mail: catherine.hillier@adelaide.edu.au

PROVISIONAL TIMETABLE OF WORKSHOPS & ASSESSMENT TASKS

(All times, dates and venues subject to changes):

- **Research Skills and Professional Development Workshops**
- **Assessment tasks and deadlines***

(* bold text denotes due dates)

MARCH

February 23 9:30 am	Introductory workshop: Overview of the program, assessment expectations and time-lines.
March 4:	Workshop: The research proposal and synopsis; effective and efficient sourcing, reading and interpretation of primary literature – beyond the text book. Formative proposal supervisor feedback – linked to summative assessment – research presentation and synopsis (Due March 25)
March 11:	Workshop: Experimental design and statistics Part 1, understanding your data before you begin.
March 20:	Sir Edward Stirling lecture in Physiology Friday 1:00 pm Florey Lecture Theatre
March 25:	Workshop: Preparing and constructing a research presentation (Presentations April 9 th)
March 25:	SYNOPSIS Due date: Submit electronically through MyUni Digital Dropbox + 1 hard copy to PTRC by 12.00pm

APRIL

April 1	Workshop: PhD seminar prelude/Journal Club (for seminar April 1)
April 7:	Submit Seminar presentation to PTRC, or submit electronically through MyUni Digital Dropbox 5:00 pm.
April 9:	Honours Research Seminar presentations (venue tbc)
April 29	Workshop, your research proposal

MAY

May 6	Research Proposal (formative assessment, for supervisor feedback and self-assessment only) Submit electronically through MyUni Digital Dropbox by 12.00pm
May 7	Research Proposal self-assessment form Submit electronically through MyUni Digital Dropbox + 1 hard copy to PTRC by 12.00pm
May 13	Workshop: PhD seminar prelude/Journal Club (for seminar May 21)

JUNE

June 3	TBA
June 10	Workshop: Critique assessment: toward correct interpretation and presentation of data.
June 17-19	Workshop: Mid year review (10-3:00) individual times to be scheduled (ca. 30 minutes per student)
June 24	TBA

JULY

July 1 **Critique of a Scientific paper. Examination 9.00 AM – 4.00 PM in the PTRC:**

AUGUST

August 5 Workshop: Statistics part 2: Interpretation of data in context.
 August 12 TBA
 August 19 Workshop: Group mid year evaluation, where do I go from here? Mapping learning objectives to employment opportunities beyond honours.
 August 26 Workshop: Poster preparation, presentation and defence

SEPTEMBER

September 2 Workshop: writing your honours thesis (DRAFT due Sept 25, Final Thesis submission October 26)
September 16 **Submit completed and printed posters to PTRC (together with 3 A3 copies)**
 September 16 Workshop: PhD seminar prelude/Journal Club (for seminar Sept 10)
September 18 **Poster Symposium Discipline of Physiology PTRC, 4th floor, Medical School South (all day)**
September 25 **Draft thesis submission submit electronically through MyUni by 12:00pm**

OCTOBER

October 8 TBA
October 26 **FINAL THESIS SUBMISSION: Submit electronically through MyUni and Hand in/Mail hard copy to the PTRC by 12.00pm**
 October 28 Workshop: Self assessment and defending your honours thesis

NOVEMBER

November 11 to **Honours oral examination of research thesis: Individual times to be**
November 13 **scheduled**
 November 13 END OF EXAMS / HONOURS DECOMPRESSION SHINING. 4:30 pm NUMICO, (Supervisors and lab members welcome)
November 23 **Bound Thesis submission/Exit form: Due as soon as possible after Oral exam, but *no later than Monday 23 November*.**
Complete exit form and submit two bound copies of Thesis to the PTRC

Assessment criteria

Assessment criteria for each of the tasks are provided here, for your information. The assessment sheet provided for the First Research Seminar are in their final form, as will be provided to assessors to grade each presentation. Criteria/information for the other tasks are for guidance only, as they may be altered slightly during the year. However, copies of the final criteria for each task will be e-mailed to each student and made available for download from MyUni prior to the due dates.

First research seminar presentation & project synopsis

The form below is provided to each examiner as a guide to marking the first seminar presentation and brief research synopsis.

**First research seminar presentation / Project Synopsis
ASSESSMENT CRITERIA SHEET
(15% OF THE FINAL MARK)**

2009

Information for Assessors of project synopsis/seminar presentation

All Honours students in the Discipline of Physiology are required to complete an 800 word research project synopsis. This is intended to provide an introduction to key literature in the area of their research project, and clear identification of the aims and objectives of their project, the main hypotheses to be tested and the experimental rationale. Students have attended an Honours Workshop where the elements of a good synopsis have been identified and discussed. Students submit the synopsis 2 days ahead of the seminar presentation, so that you have the synopsis to help inform questions that you ask at the seminar (answers to which form part of the criteria for assessment). We ask you to provide marks for both the synopsis and seminar, and general feedback for both. The criterion sheet for the synopsis allows you to indicate specific areas of strength/weakness.

We would like you to assess the synopsis and seminar using the criteria listed on the sheets provided. For feedback it would also be helpful if you circled those elements within each grouping that best reflect the quality of the work. Please use your judgement to select the grouping of criteria that most closely fit by circling statements that apply to the synopsis you assess. You can circle multiple items in different mark bands, as appropriate. You are then asked to allocate a mark within the specified range, based on the honours grade bands. Related elements can be marked in more than one grouping to reflect a range. We would appreciate you completing one Assessment form for each student, and returning them to us along with your feedback for both the synopsis and seminar.

Please do not adjust your rating on the basis that the synopsis has exceeded the word limit as the Honours Coordinator will deduct marks for all overlong work after the marks have been returned and collated.

We would also appreciate you providing (anonymous) written feedback to the student about the strengths and weaknesses of their research proposal. Rapid, constructive and detailed feedback is extremely important as it enables the students to identify areas for further improvement. Please provide this feedback by the end of **today** either as is, hand written, or as a Word document emailed directly to David P Wilson (david.p.wilson@adelaide.edu.au).

For your information here are the marks associated with various grades of Honours

First Upper	90 or 90+
First Lower	80 – 90
IIA	70-80
IIB	60-70
Third	50-60
Fail	below 50

David P Wilson (Honours Coordinator)

STUDENT NAME: _____ EXAMINER _____

CRITERIA	RANGE	GRADE
<ul style="list-style-type: none"> No clear introduction of topic or research question Superficial, poorly written introduction to literature Writer apparently unfamiliar with terminology No logical structure or clear links between sections Careless preparation-typos/poor referencing 	Below 50	Fail (please circle as appropriate)
<ul style="list-style-type: none"> Topic introduced Writer apparently unfamiliar with terminology Superficial, poorly written introduction to literature Structure unbalanced and quality patchy No evidence of critical appraisal of field Poor written expression throughout Adequate presentation – references complete 	50 – 60	Third (please circle as appropriate)
<ul style="list-style-type: none"> Topic introduced Superficial introduction to literature Unbalanced structure and patchy quality No evidence of critical appraisal of field Adequate written expression Reasonable/good presentation – references complete 	60 – 70	IIB (please circle as appropriate)
<ul style="list-style-type: none"> Topic or underlying research question introduced Reasonable introduction to literature but lacks clear description of experimental approach Reasonable structure but occasional gaps or poorly developed links between sections Some evidence of critical ability Good written expression Reasonable/good presentation – references complete 	70-75	Lower IIA (please circle as appropriate)
<ul style="list-style-type: none"> Topic or underlying research question introduced Excellent or very good introduction to literature with inclusion of appropriate experimental detail Rationale for project clear to reader Logical structure and well developed links between sections Evidence of critical skills – controversies or non resolved research areas highlighted Good written expression Good presentation and references accurate and complete 	75-80	Upper IIA (please circle as appropriate)
<ul style="list-style-type: none"> Outstanding Synopsis Excellent introduction to literature – rationale for project clear to reader Excellent structure – logical, balanced 	80-90 90-90+	I Lower I Upper (please circle as appropriate)
<ul style="list-style-type: none"> All relevant experimental detail included Highly developed critical skills evident – attempt to resolve controversies Excellent written expression/references complete/accurate 		

Synopsis mark (35% of total for joint synopsis/seminar presentation):

Please indicate a mark (out of 100) informed by the criteria as circled above

_____ /100

HONOURS IN PHYSIOLOGY 2009
ASSESSMENT OF SEMINAR PRESENTATION

Name of Student: _____ Name of Assessor: _____

% Total Mark		Mark (See information sheet)
	Structure and Content of Seminar	
20%	Was the seminar well structured (clearly stated hypotheses/aims and logical presentation of background and methods)?	_____/100
10%	Was the material put appropriately into the context of the broader research field?	_____/100
	Presentation	
10%	Was the quality and presentation of the seminar material adequate to illustrate the main points?	_____/100
10%	Did the student make good use of pointer/speak clearly/emphasise key points?	_____/100
	Discussion	
15%	Did the student demonstrate a clear understanding of the question and subject material?	_____/100

(Note: seminar marks are worth 65% of the combined synopsis/seminar mark)

Information for assessors of honours posters 2009

All Honours students in the Discipline of Physiology are required to complete a research poster on the major findings of their project and to present this orally (ca. 10 minute presentations) during the Honours symposium. They have attended a workshop on poster production where the elements of a good poster have been identified and discussed.

We would like you to assess the research proposal using the criteria listed. The criteria are divided into two groups, one relating to content of the poster itself and the second to the 10 minute oral presentation of the poster. You will be provided with a copy of the poster, in A3 format, several days ahead of the symposium. Please complete your assessment within the relevant criteria ahead of the oral presentation on the symposium day and try to think of some outstanding questions raised by the poster ahead of time. The student may address these questions within their verbal presentation, but if not you may find this useful to guide to questions that could be asked in the 5 minute Q & A session at the end of each presentation. Please use your judgment to assess the posters within each category against the percentage grades associated with the various grades of Honours:

First Upper	90 or 90+
First Lower	80 – 90
IIA	70-80
IIB	60-70
Third	50-60
Fail	below 50

We also request that you provide brief written feedback for each poster. This can be completed on the feedback form provided or submitted by email to david.p.wilson@adelaide.edu.au. We will stagger presentations that you are asked to assess so that you can complete the assessment for the each poster during the presentation of the next. While your feedback need not be a major literary work (5-6 sentences is sufficient), constructive and detailed feedback at this time of year is extremely important as it enables the students to identify areas for further improvement as they work their data into the thesis. If your grade is unusually low (below 70) it is particularly important to explain to the student where you see the weaknesses of their work. Because the students need to submit their draft thesis within the next two weeks, we request that you provide your feedback by the end of the day, Friday September 18, 2008.

Thanks once again for helping us with this task. We greatly appreciate the effort that you put into assessing the student's work.

David P Wilson
Honours Coordinator

HONOURS IN PHYSIOLOGY 2009
ASSESSMENT OF POSTERS

Name of Student: _____ **Name of Assessor:** _____

%		Mark (See information sheet)
Total Mark	Poster and Content	
10%	Is the question underlying the project clearly introduced?	_____/100
10%	Is the methodology clearly and appropriately outlined? /100 10%	_____/100
10%	Do the data as presented relate appropriately to the aims and hypotheses of the project?	_____/100
20%	Are the experimental data well organised, analysed and presented?	_____/100
20%	Does the overall layout of the poster aid clear communication of the main findings (e.g. balance between figures and text)	_____/100
20%	Oral Presentation of Poster Did the student summarise their key findings succinctly and speculate appropriately?	_____/100
10%	Did the student handle the questions in an informed manner and demonstrate a clear understanding of the more complex issues raised by the project?	_____/100

Laboratory performance (supervisors assessment)

**ASSESSMENT CRITERIA SHEETS FOR LABORATORY
PERFORMANCE WHICH ARE COMPLETED BY YOUR
SUPERVISOR AT THE END OF EACH SEMESTER
(SECTIONS A AND B)**

**PHYSIOLOGY HONOURS
SCHOOL OF MOLECULAR AND BIOMEDICAL SCIENCES**

HONOURS 2009

LABORATORY PERFORMANCE ASSESSMENT

As a supervisor of an Honours student we seek your input in the assessment of the student's laboratory performance and research potential. We would like you to rate the student's skills in a number of categories on the attached form. The supervisor's Laboratory Performance Assessment accounts for 10% of the total mark in the Honours course. Split between assessments at the end of each semester (i.e. 5% each).

As a general guide to the overall grading scheme, it is expected that the majority of students who we accept for Honours will be *capable* of achieving Second Class Division A standard. Second Class Division B will be awarded to students who perform well but show weakness in some area(s). First Class Honours is a grading reserved for exceptional students who show a consistent first class understanding of their subject area, well-developed skills in scientific communication, and a high degree of initiative and originality, in addition to the characteristics that would win a Second Class Division A award.

For this component of the assessment please rate your student's skills out of 10 in each of the categories listed on the attached form overleaf. We ask you to grade your student in relation to your experience of other students at a similar level of research training. The following may serve as a guide to the mark you award:

Mark	Performance
**10	A truly outstanding and rare level of achievement. A clear First Class result. In the top 5% of all Honours level students for this category.
9	A very high level of achievement. A clear First Class result. In the top 10% of all Honours level students for this category.
8.0 and above	A high level of achievement. A First Class result. In the top 15% of all Honours level students for this category.
7.0 to 8.0	A very good level of achievement expected of a IIa Honours student.
6.0 to 7.0	A good level of achievement expected of a IIb Honours student.
5 to 6.0	A satisfactory level of achievement expected of a III Honours student.
**0 - 5	A level of achievement below that considered appropriate for an Honours level student.

**If you award a mark in any category of 9 or higher, or less than 6, please provide the reasons for your assessment in the space provided at the end of the assessment sheets.

PHYSIOLOGY HONOURS**2009****LABORATORY PERFORMANCE ASSESSMENT FORM**

Name of Student: _____

Name of Supervisor: _____

Please complete Section A and Section B for each of your Honours students.

SECTION A LABORATORY, ANALYTICAL AND PROBLEM SOLVING SKILLSPlease rate your student's skills **out of 10** in each of the categories listed below:

- Development of new methodology/optimisation of existing methodology _____
- Maintenance of quality control and understanding of the need for precision, accuracy and reproducibility in any experimental methodology _____
- Rigorous and methodical approach to the maintenance of laboratory records _____
- Cooperative and positive member of a laboratory research team with appropriate communication skills in the laboratory _____
- Can be relied on to seek help when appropriate with technical matters _____
- Capacity to identify and evaluate a technical or methodological problem and define the important elements required for its solution _____
- Clear insight into the steps required for appropriate analysis of experimental data (including the statistical treatment of data) _____

SECTION A TOTAL

(out of 70)

SECTION B RESEARCH POTENTIAL

Please rate your student's skills **out of 10** in each of the categories listed below:

- Has demonstrated an original and critical approach in the assimilation of the current state of knowledge in this particular field of physiological research_____

- Understands the gaps or flaws in understanding in this particular research field _____

- Has independently put forward ideas for future experimental investigation in this research area _____

- Has shown interest and curiosity in scientific questions beyond the confines of the current project _____

- Has shown the overall ability to use the skills required to perform original scientific research _____

SECTION B TOTAL

(out of 50)

Assessment criteria sheet for thesis

ASSESSMENT CRITERIA SHEET

FOR THESIS

2009

INSTRUCTIONS TO ASSESSORS AND ASSESSMENT CRITERIA SHEET FOR THE HONOURS THESIS 2009
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All Honours students in the Discipline of Physiology are required to complete a thesis describing their research project. The thesis is written in the form of a scientific journal paper. Students have been instructed that the thesis must not be more than 4000 words (excluding the Title, Declaration, Abstract/Summary, Acknowledgements, & References, but including figure legends and all other text). Please do not adjust your rating on the basis that the thesis has exceeded the word limit as the Honours Coordinator will deduct marks for all overlong theses after the marks have been returned and collated. The format of the thesis is to be based on the format for a journal manuscript. We have provided students with an "Instructions for Authors" modified from that for a typical Physiology journal. A copy of these instructions will be provided along with the thesis/theses that you have been asked to assess.

Students have attended an Honours Workshop where the elements of a good thesis have been identified and discussed. Students will have discussed the contents of the thesis with their Supervisors, and Supervisors will have seen (and provided written comments on) a single draft of the thesis at least 3 weeks prior to examination.

We would like you to assess the thesis using the following criteria, in relation to your experience of other students at a similar level of research training.

The thesis should demonstrate:

- that the student has a comprehensive grasp of the current state of knowledge in their research area. Such evidence will normally be evident in the Introduction and Discussion sections of the thesis.
- a high level of competence in the techniques of data collection, analysis and presentation, as evidenced by the Methods and Results section of the thesis.
- an ability to evaluate and interpret the student's own work, and the work of others, in a critical manner with a high degree of reliability and insight. Such evidence will normally be evident in the Discussion section of the thesis.
- a high level of competence in the ability to summarise, in a clear and concise manner, the issues addressed in the study and its outcome. Such evidence will normally be evident in the Summary or Abstract section of the thesis.
- a high level of competence in the written communication of scientific material. The style, presentation and readability of the thesis are to be generally of a standard that would be expected by editors of scientific journals.

Please use the attached assessment sheet to rate the thesis against these criteria. More detail on the points we would like you to consider when assessing the various components of the thesis is provided overleaf. Please refer to this when evaluating the thesis.

We have also provided a separate Feedback section for each thesis where you can provide (anonymous) written feedback to the student about the strengths and weaknesses of their thesis. Constructive feedback is important as it enables the students to identify areas for improvement.

As a general guide to the overall grading scheme, it is expected that the majority of students who we accept for Honours will be *capable* of achieving Second Class Division A standard. A grade of **First Class Honours** indicates a high level of achievement in the criteria listed above. A grade of **IIA Honours** for the thesis indicates that the work was very good but lacking in several of the aspects listed above. A grade of **IIB Honours** for the thesis indicates that the work was satisfactory, but lacked application, depth, presentation and/or interpretation. A grade of **Third Class Honours** for the thesis indicates a poor performance overall judged against the assessment criteria. A **FAIL** grade indicates an unsatisfactory performance overall judged against the assessment criteria.

HONOURS THESIS ASSESSMENT 2009

THESIS COMPONENTS	POINTS TO CONSIDER
Title & Summary	<ul style="list-style-type: none"> • The Title is clear and concise, and alerts the reader to the main point of the study. • The Summary or Abstract outlines in a concise and accurate manner: <ul style="list-style-type: none"> the reasons for doing the experiments; how they were performed; the main findings; the principal conclusions from the results. • The format of the Summary corresponds to the convention used by the chosen journal.
Introduction	<ul style="list-style-type: none"> • The hypothesis is clearly stated. • Supporting information provided in the Introduction displays logical thought, and serves to present the hypothesis as a reasonable scientific proposal (i.e., the hypothesis fits the known facts and is testable). • The Introduction makes it clear what the experiments are about, and how they will contribute to answering the problem or question that has been outlined in this section.
Materials & Methods	<ul style="list-style-type: none"> • Materials and Methods are described accurately, and with sufficient detail that a reasonably knowledgeable colleague could repeat the experiments using this description. • Novel techniques or deviations from standard practice are described in detail. • Brief descriptions and appropriate references are provided for established techniques. • Statistical treatment of the data is appropriate, and adequately explained. • The design of the study, as described, is suitable to test the stated hypothesis.
Results	<ul style="list-style-type: none"> • Material presented in the Results section is relevant to the hypothesis. • Tables and Figures used are appropriate to illustrate the data and aid in its interpretation. • Tables and Figures are presented in a scientifically acceptable form. • Tables and Figures with their legends are capable of being understood without reference to the text. • The same data are not duplicated in both Tables and Figures.
Discussion	<ul style="list-style-type: none"> • The main findings are clearly stated. • The Discussion interprets the results (not merely recapitulates them) and matches the outcomes with the expectations based on the hypothesis. • The Discussion displays a clear and logical development of arguments and conclusions about the meaning of the results. • The arguments presented in the Discussion clarify the relevance, usefulness, possibilities and limitations of the experiments and the results obtained. • If limitations are identified, solutions to overcoming these are suggested. • Interpretation of the findings is rigorous, and conclusions are logically consistent with the known facts (including the present findings). • Implications of the study for current understanding in the area and future research are summarised appropriately. If speculative comments are made, they should fit the known facts. • The Discussion is not overly long, and does not contain material that is of marginal relevance to the results obtained, or the original hypothesis. • All literature cited has the function of supporting arguments used to interpret the findings, and is appropriate to the statement being supported (preferably the original source of the information).
Style, presentation & readability	<ul style="list-style-type: none"> • The grammar, punctuation and spelling demonstrate a proficiency in the English language that allows effective written communication of scientific material. • The thesis is written in a style that displays precision and avoids ambiguities. • The writing style is clear. Sentences and paragraphs are capable of being easily understood after being read at a single pass. • The writing style avoids unnecessary repetition. • The thesis does not contain excessive use of abbreviations or acronyms, which detract from readability. • The thesis lacks careless errors and/or inconsistencies. • Citations are used appropriately, and are complete and accurate.

- | | |
|--|--|
| | <ul style="list-style-type: none">• Citations in the References section correspond exactly with those in the text.• The format of the thesis, including citations and the reference list, corresponds to the convention specified by the Instructions to Authors. |
|--|--|

HONOURS THESIS ASSESSMENT 2009

EXAMINER: _____ STUDENT: _____

ASSESSMENT CRITERIA FOR THE THESIS	GUIDE TO MARK ALLOCATION	MARK AWARDED
Demonstrates that the student has a comprehensive grasp of the current state of knowledge in their research area . Such evidence will normally be evident in the Introduction and Discussion sections of the thesis. (20% of total)	First = 16 or above IIA = 14-16 IIB = 12-14 Third = 10 – 14 Fail = below 10	/20
Demonstrates a high level of competence in the techniques of data collection, analysis and presentation , as evidenced by the Methods and Results section of the thesis. (30% of total)	First = 24 or above IIA = 21 - 24 IIB = 18 - 21 3rd = 15 – 18 Fail = below 15	/30
Demonstrates an ability to evaluate and interpret one's own work, and the work of others, in a critical manner with a high degree of reliability and insight . Such evidence will normally be evident in the Discussion section of the thesis. (20% of total)	First = 16 or above IIA = 14 - 16 IIB = 12 - 14 Third = 10 – 12 Fail = below 10	/20
Demonstrates a high level of competence in the ability to summarise, in a clear and concise manner, the issues addressed in the study and its outcome . Such evidence will normally be evident in the Summary or Abstract section of the thesis. (10% of total)	First = 8.0 or above IIA = 7.0 – 8.0 IIB = 6.0 – 7.0 Third = 5.0 – 6.0 Fail = below 5.0	/10
Demonstrates a high level of competence in the written communication of scientific material . The style, presentation and readability of the thesis are generally of a standard that would be expected by editors of scientific journals * (20% of total)	First = 16 or above IIA = 14 - 16 IIB = 12 - 14 Third = 10 – 14 Fail = below 10	/20
Total	First Upper = 90 or 90+ First Lower = 80 - 90 IIA Upper = 75 - 80 IIA Lower = 70 - 75 IIB = 60 - 70 Third = 50 - 60 Fail = below 50	/100

(* To an extent consistent with a standard achievable by a graduate in their first year of advanced research training)