Welcome to Physics Honours 2014
We would like to welcome all of you to physics honours at ANU. Our job is to help you to have the best possible educational experience and to help the lecturers and supervisors to provide the courses and the necessary resources to make that possible.

We will meet with you frequently and listen and act on feedback that you give to us. Specifically, we would like to meet with you every Friday at 4:00 pm for an informal discussion. This will give us an opportunity to hear about any issues you are facing and to help resolve them. These meetings are important and we encourage you to attend.

The Physics Honours Handbook we have prepared here gives you essential information on the structure of the physics honours year, important dates and deadlines, thesis grading guidelines, thesis milestones etc. Further information on honours can be obtained from:

Dr James Sullivan  
Honours Coordinator  
Cockcroft Building,  
Lvl 5, Rm C5.08  
Phone: 02 61250040  
hons.coord.physics@anu.edu.au

Prof John Close  
Deputy Director (Education)  
Department of Quantum Science  
Building 38 A  
Office phone: 02 61254390  
Mobile: 0450576913  
John.Close@anu.edu.au

College website:  
http://cmbe-cpms.anu.edu.au/study/more-information/current-anu-students

Physics Honours:  

RSPE web page:  
http://physics.anu.edu.au

Please remember that your honours coordinator, supervisors and lecturers are here to help you. With appropriate feedback from you, we are confident that we can help you to achieve your goals.

Once again, welcome to the physics honours year.
Structure of the Honours Course

Coursework comprises 50% of the assessment for physics honours and is held in the first semester. The structure for coursework is similar to the ANU undergraduate coursework structure. You will take four courses in parallel but the total time per week per course will be less than the time you are accustomed to spending on courses as an undergraduate student. This is a deliberate choice to allow you enough time to make progress on background reading for your honours research project. Each of the four courses is separated into two components, part A and part B. The aim of the coursework component is to strengthen your knowledge of foundational physics.

The honours research project comprises 50% of the assessment for your honours year. Although you will start on your project in first semester, most of the work will be undertaken in second semester. The assessment for the project is broken down as follows.

A science communication course (including the writing of the introduction to your thesis) comprises 5% of the project grade.

Your thesis comprises 88% of the project grade. A final talk comprises 5% of the project grade. A mid year talk comprises 2% of the project grade.
Coursework

Your coursework begins on Tuesday 4th of February with Professor Hans Bachor’s course on scientific communication. Hans will concentrate on how to write a thesis, how to present data, how to give a scientific talk etc. Although this course comprises a small fraction of the grade, most students find it very useful.

Part A courses will commence on Monday the 17th of February and will be completed on Friday the 4th of April. All assessment for part A courses will be completed within that timeframe, including any exams. We will be strongly encouraging all part A lecturers to return grades to you no more than two weeks after the completion of the course.

Part A courses and lecturers are listed below. You will take all four part A courses.

1. Quantum mechanics lectured by Joe Hope.
2. Electricity and magnetism lectured by Matthew Hole
3. Classical Mechanics lectured by David Williams
4. Statistical Mechanics lectured by Edie Sevick.

You will have a two-week break from the 5th of April to the 22nd of April. We strongly encourage you to work with your supervisor on your project during those two weeks. You can achieve a great deal in that period of time. Understanding the project, becoming familiar with the existing literature and writing the introduction to your thesis are likely areas to concentrate on. Your supervisor will advise you on how best to spend your time.

Part B courses begin on the 22nd of April and finish on the 30th of May. All assessment for part B courses will be completed within that timeframe, including any exams. We will be strongly encouraging all part B lecturers to return grades to you no more than two weeks after the completion of the course.

For the part B courses, you will need to select four courses from a total offering of nine courses. Some of the courses are aimed more at experimentalists. The others have a heavier theoretical content. We will hold an information meeting on part B courses in late March so you can make an informed choice. The Part B courses are listed below.

1. Surface science by Maarten Vos (experimentalist)
2. Scattering by Nanda Dasgupta and James Sullivan (experimentalist)
3. Car Physics by David Williams (theorist/experimentalist)
4. Electronics by Matt Sellars and Rod Boswell (experimentalists)
5. Non-linear physics by Andrey Sukhorukov and Elena Ostrovskaya (theorists/experimentalists)
6. Electricity and Magnetism II (relativistic formulation) by Ron Burman (theorist)
7. Non equilibrium systems (stat mech) by Dennis Evans (theorist)
8. General relativity by Susan Scott (mathematical physicist)
9. Measurement theory by Matt James (theorist)
The Honours Thesis

Hans Bachor will discuss thesis writing in some depth in his course on scientific communication. In that course you will study honours theses from your area and discuss them with Hans and with your classmates. Hans will teach you the elements of a good thesis. You will get further advice from your honours supervisor and from the honours convenors. There are two documents that you need to be aware of, the milestone completion form and the honours grading guidelines. You can find both of them at the end of this handbook.

You should complete the milestone form and have it signed off as indicated as you progress through your honours year. In the case of illness, or some other situation outside your control that seriously impedes your progress through honours, you will only be given a substantial extension by the Dean if you have completed your milestone completion form. The advice from the honours convenors is to complete the form as you go.

The honours grading guidelines supplied at the end of this document are the guidelines examiners use to grade theses. Examiners are required to make specific reference to the grading guidelines. For this reason, it is important that you read the guidelines so you know what the examiners are looking for. Hans Bachor will discuss the guidelines in his course on scientific communication.

Remember to check out the honours grading guidelines on pages 9 and 10 of the College Honours Handbook!
Important Dates

Weekly meetings will be held at 4:00 pm every Friday with the honours convenors. We will meet in the honours lecture theater in Huxley for a brief discussion and then adjourn to the University House bar. These are important meetings. They are your opportunity to tell us how the week went so we can help make the next week better. Please do your best to attend and be vocal! Please put the following important dates in your calendars.

- Monday 3rd of February at 11:30 am. Induction, honours lecture theatre, Huxley. Lunch will be provided.

- Tuesday 4th of February, Science communication course begins.

- Monday 17th of February, Part A courses begin.

- Monday 31st March. Information session on part B courses.

- Friday 4th April, Part A courses end.

- Thursday 17th of April, deadline to communicate your part B choices to the honours coordinator.

- Tuesday 22nd of April, Part B courses begin.

- Friday 30th May, Part B courses end.

- Tuesday 10th of June and Wednesday 11th of June. Mid year talks will be held. Talks will be 12 minutes long with 3 minutes of question time.

- Thursday 23rd of October, Honours theses due.

- Thursday 6th of November and Friday 7th of November, Final talks.
## Table of Contents

1. Introduction to Honours ................................................................. 2
2. Application and Enrolment Information ........................................ 2
3. General Guidelines ...................................................................... 3
4. Scholarships ................................................................................. 6
5. Ethics in Research ....................................................................... 7
6. Occupational Health and Safety .................................................... 7
7. Intellectual Property ..................................................................... 7
8. Thesis Writing Guide ................................................................. 8
9. Data Fabrication & Plagiarism ...................................................... 8
10. Extensions Policy ......................................................................... 9
11. Minimum Requirements for Assessment ..................................... 9
12. Classifying Honours Performance ............................................. 9
13. Grading Criteria ......................................................................... 9
14. Minimum Allocation of Resources ............................................ 11

**Important:** These guidelines do not apply to students in the Bachelor of Medicine and Bachelor of Surgery (4900XMBBS) program. Honours information for this program can be found at [http://medonline.anu.edu.au/medonline/2012/index.asp](http://medonline.anu.edu.au/medonline/2012/index.asp)
1. Introduction to Honours

Honours programs at the ANU take one academic year (full time). Honours aims to build on the knowledge and skills that you have learned in your undergraduate career. In doing so, Honours continues and rounds out a process begun in the study of your chosen field at an undergraduate level. However, Honours is much more than this. It is a time of social, professional and intellectual development in which students become better acquainted with some of the central features of academic life: seminars, workshops, presentation of work to colleagues, research design and communication of scientific findings.

Accordingly, students are generally given much more autonomy and responsibility for their own intellectual development during this year than previously. All Honours degrees at ANU are based on the model of developing your skills, under supervision, as an independent researcher and innovative thinker. Honours will also test your organisational skills: in particular, your ability to prepare, define, plan, carry out and report on research. As an Honours student in Science, you will undertake your own empirical research on a topic you choose to study and your research should involve the creation of 'new' information and knowledge in your chosen field. You will prepare a thesis that presents the background for and describes and explains your research findings. Some Honours programs also involve a coursework component.

Therefore, Honours offers the opportunity to develop a level of learning and a suite of skills that add significant value to those gained during a Pass (Bachelor) degree. Consistent with this, the ANU Undergraduate Handbook states that completion of an Honours Degree attests to the following achievements:

- Greater depth and breadth of knowledge within the chosen field of study;
- Development of an independent approach to and ability in research and in academic communication;
- A superior academic ability, as judged by performance in second and third year units and in the Honours year.

Your year as an Honours student will probably be the most testing, but also the most rewarding, of your undergraduate career.

2. Application and Enrolment Information

A first step in gaining entry to Honours is to meet the entry requirements. The main requirement is a credit average in your undergraduate degree (in practice, higher marks may be required as Honours entry can be competitive). Some areas also require that you complete certain subjects or courses in your Undergraduate degree.

The minimum requirement for admission to an Honours course is as follows:

(a) the successful completion of at least 48 credit points of later-year Science units relevant to the proposed field of Honours study, of which at least 24 credit points must be for Group C units;
(b) the attainment of an average of 6 for the 48 credit points, where HD=10, D=8, CR=6, P=4;
(c) the recommendation of the Head of Department/School concerned, in the light of availability of resources and appropriate supervision.

2.2. There is no time limit between completion of the pass degree and commencement of the Honours year. However a gap of more than three years requires the approval of the Delegate Authority on advice from academic area, who will take into account the relevance of work experience in the gap years to successful completion of Honours.
2.3 Graduates of other universities may be accepted for admission to Honours candidature provided that the undergraduate program and performance in that program are of a standard comparable to that applying in the relevant Department/School.

2.4. If a Department/School has entry requirements additional to those set out in 2.1, due publicity of these requirements must be given in the University Handbook.

Enrolment for Honours involves both applying for admission to the School or Department and, once you have been accepted, taking the formal step of enrolling with the University. The College in which you are taking your degree has the authority to finalise your enrolment, subject to acceptance by the Head of School/Department. The timing of steps is set out in the Honours Timeline section of this Handbook. Current ANU Students need to complete the Honours Application Form available at http://cmbe.anu.edu.au/study/student-guide/degree-programs/undergraduate-honours and submit it to the Honours Convenor in the School or Department you intend to undertake the program. Students who completed their Undergraduate Degree at a different University, or ANU Graduates who completed prior to the current Semester without taking leave will need to complete the Undergraduate Application for Local Students or Undergraduate Application for International Students available at http://www.anu.edu.au/sas/forms/index.php.

It is advised (and considered essential in some areas) that you prepare for the particular topic you choose to study. You may consult Convenors and potential supervisors about the suitability of your courses and your research interests as you proceed towards Honours. When talking about your research interests with potential supervisors, you may wish to discuss:

- Their research interests and research plans for the coming year;
- Your own interests and ideas;
- Their preferred supervisory style (How often do they like to meet? Exactly how independent do they expect a student to be? Do they already have a specific project in mind?);
- What they expect of an Honours student.

Your application will be considered together with others, and you will be advised of the outcome as soon as possible. This will not be before outstanding examination results are available.

3. General Guidelines

3.1 Student Information

An information document must be made available by Departments/Schools to prospective Honours students in their third year outlining aspects of the Honours program (copy to Dean). These might include information on entry requirements, admission procedures, the role of the Honours Convener (Chair of Examiners), student rights, availability of equipment and support, availability of mid-year courses, length of program, details of program components, weightings and the need for students to consult with the Department/School on structure and assessment.

3.2 Procedure

3.2.1 In accordance with the Rules of the University, a Chair of Examiners and at least one other examiner will be appointed by the Head of the Department/School for each calendar year.

3.2.2 The Head of Department/School will appoint an Honours Convenor to be responsible for the co-ordination of the Honours program.

3.2.3 The name of the Honours Convenor for the following year must be reported to the Secretary of the Honours Committee in November each year.
3.2.4 There is an Honours Committee that consists of the Honours Convenors and a Chair appointed by the Deans.

3.2.5 Students seeking admission to the Honours program should be requested to approach, first, the Honours Convenor for advice on entry requirements and supervision and, second, any prospective supervisor(s), before submitting an application.

3.2.6 Students should be advised of their right to approach the Honours Convenor where difficulties arise, for instance, regarding supervision.

3.3 Program Duration

3.3.1 The precise duration of full-time Honours candidature is set by the Honours Committee and will not exceed a period of eleven months. Specified requirements should be strictly observed.

3.3.2 Extension of time to submit beyond two weeks after the nominated completion date will be subject to the approval of the Dean/s or Deputy Dean/s and should be granted only when there are factors clearly beyond the control of a student.

3.3.3 Suspension of Honours candidature will be subject to the approval of the Dean/s or Deputy Dean/s.

3.4 Outside Supervision

Subject to approval by Honours Convenor / Head of Department / School, thesis supervision may be provided by a person outside the Department/School provided that this supervisor is substantially involved in the Honours program of the particular Department/School and is responsible to the Head of the Department/School for the supervision of the student.

3.5 Part-time Candidature

Part-time candidature is subject to the approval of the Delegate Authority on the recommendation of the Department/School concerned; confirmation will be required that the workload and the time allocated to complete the work are comparable to the requirements for full-time students.

3.6 Forestry

3.6.1 Both concurrent and final (fifth) year Honours are available in the course for the degree of Bachelor of Science (Forestry).

3.6.2 For concurrent Honours

(a) students must have completed all first-year units; maintained at least a Credit average in Group B and C units; demonstrated superior achievement (Distinction, High Distinction) in units relevant to the topic area in which they propose to undertake Honours; and are in the fourth year of the BSc(Forestry) degree;

(b) the grade of Honours awarded is based on performance in the Honours thesis.

(c) students must maintain a minimum overall average of 6 (on the scale defined previously) for the other courses taken concurrently to be awarded 1st or 2A Honours.

3.6.3 For final year Forestry Honours, the minimum entry requirement is at least four grades of Distinction and eight grades of Credit in relevant Group B and C units with a minimum overall average of 6 on the scale defined previously.
3.7 Combined Honours

Honours in Science may be pursued in two programs under the following conditions:

(a) enrolment in each combined Honours course will depend on:

- both Departments/Schools accepting the candidate, the proposed course and assessment procedures;

and

- the student satisfying the minimum requirements for admission to Honours;

(b) a combined course will be integrated and will be shared approximately equally by the two Departments/Schools involved. The combined course will not be awarded for work done predominantly in one department and supplemented by work done in another department;

(c) there should be at least one supervisor for each Department/School, one of whom must be appointed as coordinator of the integrated course. The other Department/School must supply a chair of examiners.

3.8 Expectations of Students and Supervisors

As an Honours student, you are at a stage intermediate between undergraduate and graduate work. Formally, the University classifies you as an undergraduate. However, your work is more like that of a graduate student. In practice, Honours combines the best of both worlds. Honours is about training you as an independent researcher and you will experience some of the independence and self-direction required of graduate research students, but you also have close contact and direction from your supervisor(s).

All Honours students have a supervisor (in some areas, it may be possible for a student to be jointly supervised by two people). The relationship between supervisor and student involves obligations on the part of both parties. Your supervisor will assist you with advice, guidance and criticism, and help you to achieve your personal academic goals. The supervisor is there to help you choose and design the research project, guide the research in a practical and productive way, and advise you on writing the best thesis of which you are capable. At the same time, your supervisor can only guide your efforts, and then only if you are receptive to advice. You must take the responsibility for the final results of your work.

We expect that you will:

- Maintain a close dialogue and constructive working relationship with your supervisor(s);
- Plan your research program and budget with your supervisor(s);
- Consider advice seriously. If advice is not taken, the supervisor should be informed and given the reasons for the decision;
- Consult regularly with your supervisor. Students should prepare in advance for consultations, by determining the help they require and the areas in which advice would be useful;
- Interact with other students and staff in accordance with the relevant University policies (e.g. Equity and Diversity Policies);
- Contribute to the academic life of the School/Department and Graduate Program by attending all relevant seminars;
- Treat School and University facilities and resources with respect and care, and follow Occupational Health and Safety requirements;
• Observe the relevant University and School/Department rules and regulations (see Graduate Program and School/Department Handbooks);
• Complete the formal requirements for Honours, as described in this handbook;
• Complete, to the best of your ability, a well written, thorough and competent bound thesis of the highest standard.

Early in the year you need to establish an understanding of your skills and ability to carry out your research. Your supervisor is crucial in this process. In the early series of meetings with your supervisor you need to establish:

• An appreciation of your skills and competency for the project you propose to study (e.g. IT literacy and fluency, data analysis, your oral and written communication skills);
• Your work schedule and meeting times, including any times of absence from campus for you and supervisors;
• Resources and technical support available to you for the project;
• How to gain clearance of study with ethics committees;
• ‘Terms of engagement’. Your supervisor(s), even if they already know you, will be developing a deeper understanding of who you are through the close relationships that develop in the course of a research project. You will also need to talk about how you will organise your year and arrange a schedule for your research (note that extensions cannot be granted for failure to plan in this way).

Throughout the year, your supervisor will expect to see drafts of your work as the project progresses. It is your responsibility to provide work to your supervisor(s) at mutually convenient times so that full consideration can be given in time for submission by the due date. In some Schools and Departments, there is a limit on how many times a supervisor can read sections of a student’s thesis.

Students who encounter difficulties should first attempt to resolve them with their supervisor. If this does not produce satisfactory results, they should then consult the Honours Convenor and then, if the matter remains unresolved, the Head of School/Department.

Your supervisor also has responsibilities. These are to:

• Assist you in selecting and defining the scope of a suitable thesis topic or problem; assist you in devising a schedule for the year's thesis work;
• Guide you in the selection and application of appropriate data collection and analysis procedures and advise on the solution of any difficulties that arise;
• Advise on matters of thesis content, organisation and writing, including the timely provision of comments, written and oral, on drafts or portions of the thesis;
• Meet frequently with you to discuss and evaluate each stage of the thesis project.
• Monitor your progress and advise you when progress is unsatisfactory;
• Assist you in gaining clearance from the ethics committee (see Ethics in Research below).

4. Scholarships
Information regarding Scholarships open to Honours students can be found on the ANU Scholarships website http://www.anu.edu.au/sas/scholarships/honours.php. Additional scholarships may be offered by individual Schools/Departments. Please contact the relevant Honours Convenor for more information.

5. Ethics in Research
At the ANU, two research Ethics Committees oversee research on humans and other animals – the
Human Research Ethics Committee and the Animal Experimentation Ethics Committee. All research projects involving humans and other animals must be approved by the relevant ANU Ethics Committee and data gathering cannot begin until approval is given.

Before undertaking research on humans or animals you must be familiar with the National Statement on Ethical Conduct in Research Involving Humans and the NHMRC Australian Code of Practice for the Care and Use of Animals for Scientific Purposes available from the Office of Research Integrity website http://www.anu.edu.au/ro/ORI/ORI_index.php. Application forms for ethics approval for work on humans and animals are also available from this site.

Research involving recombinant DNA must also be approved by the Office of the Gene Technology Regulator (OGTR) and the Institutional Biosafety Committee (IBC). Further information and application forms are available from http://www.anu.edu.au/ro/ORI/dna.php. You must use the latest version of all forms.

You will need to know quite a bit about your research project before you can fill in an ethics application form. However, you should aim to get your ethics form in as early as you can in the year, as approval can take over a month. All ethics applications must be looked at by your supervisor and must be approved by your Head of School/Department before being submitted.

Once you have received approval and begin your research, the onus is on you to behave in a way that is consistent with ethical research practice. Included in this is your behaviour towards your fellow researchers (other students and staff) as well as your human or animal participants. Failure to conduct your research in an ethical manner may jeopardise the university's entire research effort, as the university is bound by the bodies that fund its research to ensure that ethical practice is maintained at all times.

You should also read the ANU’s documentation on responsible research practices at http://info.anu.edu.au/Policies/_DRO/Policies/Responsible_Research_Practice.asp.

6. Occupational Health and Safety

The University will provide a workplace that is, as far as reasonably practicable: safe and healthy for staff, students, and visitors; and without risk to the environment, in compliance with the Occupational Health and Safety (Commonwealth Employment) Act 1991, other relevant legislation, national standards and codes of practice. Staff, students and visitors are required to do all that is reasonably practicable to ensure that their actions or omissions do not create or increase a risk to the health and safety of themselves or others. Safe work procedures must be observed at all times and equipment must be used in accordance with safe work instructions. Any incidents, exposures, hazards or OHS concerns within the workplace should be reported.

Occupational Health and Safety workshops are available for Honours students and may be compulsory in some areas.

For more information about Occupational Health and Safety go to: http://info.anu.edu.au/hr/OHS/index.asp

7. Intellectual Property

The ANU does not, in general, claim ownership of the intellectual property (IP) that Honours students generate. However, under some (rarely seen) circumstances it will ask individual students to sign an agreement assigning their ownership rights. These circumstances include where:

- The generation of this IP has required substantial use of University resources and/or services beyond that which is ordinarily provided to students; or
• The generation of IP has resulted from the use of pre-existing IP owned by, or existing within, the University; or
• The IP belongs to a body of IP generated by a team including members of staff of which the student is also a member; or
• The IP results from collaboration, either formal or informal, in a research project with staff; or
• The IP has been generated as a result of funding provided by or obtained through the University.

Where a student is involved in research that is likely to lead to the generation of IP, the University will take reasonable steps to protect students’ rights to include their research in their thesis and to be able to publish papers and theses. For more information about the University’s policy on IP, go to: http://policies.anu.edu.au/policies/intellectual_property/policy

8. Thesis Writing Guide

The process of writing your thesis is an exercise in scientific communication. Your thesis must ‘tell a story’, in the sense that it must have a beginning, middle and an end. The information you present must be logically structured and must give the reader the sense that they are progressing towards a greater understanding of the topic in general, and of your own research in particular. Your thesis must be analytical and critical in nature, not just descriptive. Your thesis must stand as evidence that you are a competent researcher and that you understand your field and identify strengths, weaknesses and gaps in knowledge or explanation or theory. Your study (hypotheses, design and method) must follow logically from your introduction. The questions you are asking in your research and the measures you are using must make sense in the context of what has gone before in the introduction. In general, your report should start out at a broad level, become narrower and focused in the presentation of your research, and then broaden out again by the end of your discussion.

Your thesis will be written according to a word limit that is defined by your School or Department. This limit is a maximum and you must not go above it. Excessive length will be penalised. In some Schools and Departments, theses that exceed the word limit are returned to the student for condensing, and late penalties apply.

When you are writing your thesis, it is advisable that you look at theses written by previous Honours students in your area. Most Schools and Departments have a library of past theses that you are able to borrow for short periods.

9. Data Fabrication & Plagiarism

The falsification of results gained during the course of your Honours work is a serious offence and will not be tolerated. It is essential that students maintain a careful written record of experimental procedures and results. The copying or summarising of another person’s results or ideas as if they were one’s own is a form of theft and will not be tolerated. The source of such material must always be cited in the text and bibliographies of your written work.


Penalties for such offences may include suspension or termination of a student's course of study.
10. Extensions Policy

Extensions to thesis (and assignment) deadlines will only be granted for health reasons or for unforeseen circumstances (i.e. that arose due to factors beyond the student’s control). Extensions will not be granted for work reasons or due to circumstances that should have been anticipated by you, the student. Extensions to thesis deadlines require careful and complete documentation of the causes and demonstration that the circumstances were beyond the control of the student. Such applications should be discussed with the supervisor, and, following this, with the Honours Convenor. The Head of School/Department must approve any extension of up to two weeks. Extension of time to submit beyond two weeks after the completion date will be subject to the approval of the Deans or Deputy Deans on the recommendation of the Head of School/Department. Note: No application for an extension will be considered unless the Milestone Completion Form is submitted by the required due date. The Milestone Completion Form has to be submitted by the due date i.e. the Monday prior to the thesis submission date.

11. Minimum Requirements for Assessment

- There should be at least two examiners, the examining panel, for every thesis;
- The examining panel should not include a supervisor (except in cases where the Dean/s have approved the inclusion of a supervisor as failure to do so could affect the expertise of the assessment);
- At least one examiner should not be a specialist in the topic of the thesis;
- Students must have had written descriptors of the marking criteria that will be used to assess their thesis;
- There must be a clear and objective link between the written descriptors and the grades assigned;
- Examiners must use the relevant College grade descriptors in providing a mark;
- The examining panel will construct a brief written report on each thesis;
- The examining panel will attempt to arrive at a consensus grade recommendation for the thesis;
- Supervisors will be duly consulted by the examining panel or the examiners. The final recommendation on a grade by the panel should be made without the supervisor present (except in cases where the Dean/s have approved the inclusion of a supervisor as failure to do so could affect the expertise of the assessment);
- Final marks for an overall Honours grade and the components are arrived at in a meeting with all examiners present;
- There should be some feedback to the student on the progress of the thesis by the mid point of their project.

12. Classifying Honours Performance

The class of Honours awarded is based on the performance in the Honours year (with the exception of concurrent Honours in Forestry - see item 3.6).

13. Grading Criteria

The following criteria are used to assess the quality of theses and to assign grades. Departments will ask the supervisors to comment on whether the students have demonstrated some of these characteristics; while the judgement on other characteristics will rely purely on the thesis.

13.1 Honours IIII 50-59:

- The student has demonstrated some knowledge of the relevant background literature, but with serious gaps, and limited understanding;
• The student applied relevant techniques and carried out research work, but needed considerable assistance and showed limited understanding of the procedures employed;
• The student presented their results, though in a somewhat muddled and/or incomplete way.

13.2 Honours IIB 60-69:

As for Honours III, but in addition:

• The student has demonstrated a reasonable knowledge of the relevant background literature, with only a few gaps, albeit in a somewhat uncritical way;
• The student demonstrated that they had learned many of the relevant skills (which might include laboratory techniques, computer programming and statistical analysis);
• The student presented their results in an appropriate format, and communicated them effectively.

13.3 Honours IIA 70-79%:

As for Honours IIB, but in addition:

• The student has demonstrated a thorough knowledge of the relevant background literature, though still with limited critical appreciation;
• The student demonstrated reasonable technical mastery of all the relevant skills;
• The student worked hard, efficiently and carefully;
• The student presented their results and/or data clearly and succinctly.

13.4 Honours I 80-89%:

As for Honours IIA, but in addition:

• The student has critically analysed the relevant background literature rather than merely summarising it;
• The thesis demonstrates a clear appreciation of how their work fits in to the larger field of research;
• The student demonstrated considerable technical mastery of all the relevant skills;
• They showed some appreciation of the limitations of the experimental design or techniques used and have outlined future research directions that are feasible;
• The student put forward their own useful and valid ideas relating to the project;
• The student further demonstrated the ability to see, and take, the logical next step without excessive ‘prodding’, the ability to act independently of the supervisor’s immediate direction and presence, but the maturity to know when the supervisor’s help is necessary;
• The student demonstrated the persistence and ability to carry on under difficulty;
• They picked up new concepts and skills rapidly;
• They showed the ability to work effectively in the presence of others.

13.5 Honours I >90:

As above, but in addition:

• The student obtained concepts and procedures independently from the literature and at least discussed a use for them in the study;
• The student demonstrated impressive technical mastery of all the relevant skills;
• They demonstrate a good understanding not only of the techniques they employed, but other alternative techniques and the reasons for choosing between them;
They have outlined possible future directions which are not merely feasible but which show considerable originality;
The student not only put forward useful and valid ideas relating to the project, but also demonstrated the ability to critically evaluate and act upon such ideas.

14. Minimum Allocation of Resources

The ANU College of Medicine, Biology and Environment (CMBE) and the ANU College of Physical and Mathematical Sciences (CPMS) are committed to providing a research environment for Honours students that is unparalleled anywhere else in Australia. As part of this commitment, both colleges aim to maintain and improve research resources for students undertaking Honours. This document outlines the responsibilities of schools within the two colleges that are offering Honours projects and the minimum level of support that is to be provided to students enrolled in Honours.

14.1 Principles

The acceptance of an Honours student into a school within CMBE or CPMS implies that the school accepts responsibility to provide a level of support sufficient to enable the completion of the student's initially agreed Honours project and any agreed variation; such support will include adequate supervision, the provision of adequate resources and appropriate research accommodation.

14.2 Responsibilities of Supervisor(s), Convenors and Directors

Primary responsibility for oversight of an Honours candidate's work rests with the supervisor(s), including advice on the availability of resources needed to complete the thesis on time (e.g. school resources, computing, library, fieldwork).

The Honours Convenor's functions include informing new students of resources and providing or arranging pastoral support for students enrolled in Honours, in particular to assist in the resolution of problems that may arise between students and supervisors.

It is the responsibility of Directors, through each supervisor, to provide a level of resources sufficient to enable the completion of the student's initially agreed Honours project and any agreed variation. Information on minimum resource support for Honours projects should be conveyed to both commencing and continuing Honours students. Different Honours student projects may have different costs even within the same discipline, and the area in which the student is located is responsible for determining and providing sufficient resources.

14.3 Minimum School Resources

Students specifically enrolled in a 10 month program of research and related activities leading to the award of Honours in CMBE or CPMS are assured that the sponsoring area undertakes to provide the following minimum resources:

Sufficient laboratory or office space, infrastructural equipment and facilities to complete the Honours project, these items to be available during the research component of the course, in particular:

- Normal University standards of accommodation, including a desk and chair, located in an area which is secure, within reasonable proximity of the host school; and with internal access to toilets and wash room.
- A lockable filing cabinet or locker/drawer.
- Reasonable access to computing and relevant software facilities.
- Reasonable provision for stationery, postage and receipt of mail; access to photocopying facilities and fax; and use of a telephone (the terms of such provision to be clearly defined at the time of induction).

14.4 Honours Committee Review and Student Grievances
The Honours Convenor should from time to time review the provision of resources for students enrolled in Honours, and recommend the provision of such additional resources as may appear necessary for the particular discipline concerned. When uncertainty arises concerning the meaning of "sufficient" and "reasonable", the Honours Committee should adjudicate.

When agreement about resources cannot be reached within the school, including after being reviewed by the relevant Director, an appeal may be lodged with the relevant Dean.
# Milestone Completion Form

*To be completed by students undertaking Honours in CMBE & CPMS (excluding MBBS students) prior to submission of the thesis. The form serves as an important checklist for the student, supervisor and Honours convenor to ensure that satisfactory progress is being made towards submission of the thesis. All four milestones should be signed off by the student and the supervisor and the completed form returned to the relevant Honours convenor by **3pm on Monday 20th October 2014**. Please note that no application for an extension will be considered unless the completed form is submitted by this time.*

| Student Name: |  |
| Uni ID: |  |
| Honours Program: |  |
| Honours Convenor: |  |
| Supervisor: |  |

1. Proposal seminar and/or research plan has been done.

| Student’s Signature: | Date: |
| Convenor’s or Supervisor’s Signature: | Date: |

2. Mid-course seminar and/or progress report has been done.

| Student’s Signature: | Date: |
| Convenor’s or Supervisor’s Signature: | Date: |

3. The scope of all major data collection/field work/experiments/calculations/background reading that are required for submission has been done. It is recommended that this should be signed off on or before **Friday 26th September 2014**.

| Student’s Signature: | Date: |
| Convenor’s or Supervisor’s Signature: | Date: |

4. A first draft of the thesis has been submitted to the supervisor and has been returned by the supervisor with comments. It is recommended that this should be signed off on or before **Friday 10th October 2014**.

| Student’s Signature: | Date: |
| Convenor’s or Supervisor’s Signature: | Date: |

*Please note that the actual Milestone Completion Form used in each of the Honours programs may vary from that shown above. Please check with your respective Honours convenor.*
<table>
<thead>
<tr>
<th>Event</th>
<th>Due Dates</th>
<th>Other Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PREVIOUS YEAR</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANU Honours Scholarship - Application closing date</td>
<td>30th November</td>
<td>Not available</td>
</tr>
<tr>
<td>Admission Application closing date</td>
<td></td>
<td>Applications submitted after the advertised closing date will be assessed at the discretion of the Honours Convenor.</td>
</tr>
<tr>
<td>Internal applications</td>
<td>30th November</td>
<td>Last Friday in June</td>
</tr>
<tr>
<td>External applications</td>
<td>30th November</td>
<td>Last Friday in June</td>
</tr>
<tr>
<td>Department of Psychology * Both Internal and External Applications</td>
<td>31st October</td>
<td>31st May</td>
</tr>
<tr>
<td>Starting Date</td>
<td>28th January (2014)</td>
<td>14th July (2014)</td>
</tr>
<tr>
<td>Course enrolment deadline (for late applications)</td>
<td>Second Friday of Semester 1 teaching period</td>
<td>Second Friday of Semester 2 teaching period</td>
</tr>
<tr>
<td><strong>MILESTONE 1:</strong> Proposal seminar/research plan</td>
<td>March (2014)*</td>
<td>August (2014)*</td>
</tr>
<tr>
<td><strong>MILESTONE 2:</strong> Mid-year seminar/report</td>
<td>June/July (2014)*</td>
<td>November/December (2014)*</td>
</tr>
<tr>
<td><strong>MILESTONE 3:</strong> Completion of all data collection/fieldwork/experiments/calculations/background reading</td>
<td>First Friday in October (2014)*</td>
<td>First Friday in May (2015)*</td>
</tr>
<tr>
<td><strong>MILESTONE 4:</strong> First draft of thesis reviewed by supervisor and returned to student</td>
<td>Mid October (2014)*</td>
<td>Mid May (2015)*</td>
</tr>
<tr>
<td>End of year seminar</td>
<td>October/November (2014)*</td>
<td>May/June (2015)*</td>
</tr>
<tr>
<td>PhD/Scholarship application closing date</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domestic applications</td>
<td>31st October</td>
<td>TBA</td>
</tr>
<tr>
<td>International applications</td>
<td>31st August</td>
<td></td>
</tr>
</tbody>
</table>

*These dates are indicative only. Specific due dates should be confirmed with your Honours Convenor
2014 Submission Guidelines for Honours Students

The following submission guidelines will apply to students beginning Honours in 2014.

- Each student must upload one electronic copy of their thesis in Portable Document Format (PDF) to the Science Honours Thesis Submission site in Wattle by the due thesis submission date. Some Honours programs may also require the submission of one or more printed copies of your thesis at this time so exact requirements must be confirmed with your Honours Convenor.

**All theses are to be submitted by 5pm on:**

- **January Commencement:** Thursday 23rd October 2014
- **July Commencement:** Thursday 28th May 2015

- If you miss the Thursday deadline your next opportunity to submit is:
  - **January Commencement:** Friday 24th October 2014
  - **July Commencement:** Friday 29th May 2015

Any theses submitted by 5 pm on this day will be penalised 2% of the assigned mark for the thesis and a further 2% per day late thereafter. A submission on Monday will be penalised 8%, Tuesday 10%, etc.

- Extensions will only be granted in exceptional circumstances where students can document unforeseeable circumstances that have impacted on their ability to submit on time and on the proviso that all the milestones noted below have been met.

- No applications for extensions for unforeseeable circumstances occurring prior to the due date will be accepted on the due date.

Students are required to complete a number of milestones during the Honours year and submit the Milestone Completion Form (available from your Honours convenor) prior to submission of the thesis. It is each student’s responsibility to ensure that the completed form is submitted to the respective Honours convenor by 5pm on:

- **January Commencement:** Monday 20th October 2014
- **July Commencement:** Monday 25th May 2015

No application for an extension will be considered unless the completed form is submitted by this time.

Milestones to be completed:

1. Proposal seminar and/or research plan.
2. Mid course seminar and/or progress report.
3. A month before submission both the student and supervisor to sign off on the scope of all major data collection/field work/experiments/calculations/background reading that are required for submission.
4. **Two** weeks before submission both the student and supervisor to sign off that a first draft of the thesis has been submitted to the supervisor and has been returned by the supervisor with comments.