HONOURS PROGRAM IN ZOOLOGY

L.A. Barmuta & A. Edwards, School of Zoology,

University of Tasmania
Jan 2012
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2. **Content of Honours in Zoology**

The Honours course in Zoology is designed to provide training in the skills, methodologies and knowledge of Zoology beyond that obtained in an undergraduate degree program. The course has been designed with four key objectives in mind.

1. To enable students to develop their communication skills using both written and spoken English. By the end of the course a student should be capable of writing a scientific report or paper, to a standard acceptable to a scientific journal, and of delivering an oral presentation at a meeting of a scientific society.

2. To provide students with experience of relevant field, laboratory and
analytical procedures and techniques so that they possess sufficient technical skills to permit them to conduct an in-depth study of some specialised aspect of Zoology.

3. To ensure that students are able to locate published information within a prescribed field of zoological knowledge, and are able to evaluate and summarise that information in order to identify key issues, trace historical developments and produce generalisations.

4. To provide students with the opportunity to conduct a scientific investigation and, in particular, to train them to plan and conduct a program of study within constraints imposed by time, money and technical resources.

In order to achieve these general objectives the Honours program consists of the following components: a research plan, a literature review; a research proposal; two seminars and a research project. Each of these has a series of teaching objectives, identified below. Those marked * are for training purposes only and, whilst they may be prerequisites for eligibility for an Honours award, they do not contribute to the final assessment; all other objectives are graded and directly contribute to the final award.

The Honours program lasts for 38 weeks for Zoology Honours students.

2.1. *Research Plan

The objectives of the Research Plan are to:

1. ensure that a tractable research project has been developed;

2. identify the resources necessary to complete the research;

3. solicit feedback from the examining panel of the Research Project to ensure the quality of the research;

4. provide training in the formulation of a research project;

5. provide training in the auxiliary tasks of designing zoological research such as ethics and permit applications, and occupational health and safety requirements.

A short (5 single-sided, single-spaced A4 pages maximum) written Research Plan will be submitted to the examining panel no later than 6 weeks after the start of the Honours program. In circumstances where practical work has had to start earlier than Week 4, the Honours Co-ordinator may require that the
Research Plan be submitted and assessed prior to the start of substantive field or laboratory work. The goal of this procedure is to ensure that both the student and their supervisor(s) have a mutually agreed research plan, together with appropriate back-up procedures the cover potentially risky parts of the research program.

The format of the Research Plan is flexible, but it should contain a brief statement of the main aims or goals of the research, an outline of the methods that will be used to address the aims, an outline of the anticipated data analyses, and a section identifying anticipated major problems with the research program together with suggested alternatives or other back-up procedures.

As part of preparing the Research Plan with their supervisor(s), students should also get exposure to and training in relevant areas of occupational health and safety and, where appropriate, the preparation of ethics and permit applications. Ethics and permit applications should be developed in conjunction with the supervisor and submitted within the first three weeks of the Honours Program, and supervisors are strongly encouraged to lodge applications before the start of Honours if this is necessary to ensure a timely start to research work.

The Research Plan will be read and commented on by the examining panel, and a meeting is usually convened with the panel, the student and all co-supervisors to discuss the Plan and provide feedback. Although a Research Plan is a requirement of the Honours Program, it is not formally assessed, nor is it to be bound in with the final research thesis. The examining panel will normally consist of the panel that assesses the research thesis, but this may be varied in consultation with the Honours Co-ordinator if necessary.

2.2. *Literature Review*

The objectives of the Literature Review are:

1. to provide a factual background for the research project;

2. to develop competence in locating information, particularly in the use of library resources;

3. to develop the ability to structure information, particularly with regard to synthesising, evaluating, generalising, summarising, and identifying areas of profitable study;

4. to develop the capacity to work within constraints, particularly those of
to improve writing skills so that arguments can be presented in a logical sequence using clear, concise and unambiguous English; and

6. to develop skills in the use of word processors to write complex scientific documents.

The Literature Review should concentrate on the area of Zoology relevant to the topic for the research project. Its length should be between 5500 and 7000 words, including in text citations, figure and table captions, but excluding table of contents, references and appendices. The cited references should number between 30 and 50, although some topics may require fewer or more citations. The student should consult with their supervisor if they feel the need to go outside these guidelines. The final version of the Literature Review will be submitted through Turnitin (plagiarism detection software) on the same day as the hard copy is submitted. Please include a signed plagiarism coversheet statement with your hard copy submission.

Unless otherwise specified by the School, the first three weeks of the course should be devoted to the Literature Review and to developing a research plan for the Honours project. Practical work should commence after this, and initially will be carried out concurrently with the Literature Review, and the student should submit the completed Literature Review by the date set in the Honours Schedule.

The preparation of the Literature Review will involve extensive interaction with the student’s supervisor, and the latest edition of *Style Manual for Authors, Editors and Printers* (Snooks & Co. 2002; published by John Wiley & Sons Australia) is recommended to resolve issues of written style (e.g. use of abbreviations, punctuation, use of non-sexist language, etc.) Other style manuals relevant to Zoology may be used instead, in consultation with the supervisor, but the style used should be consistent. The Literature Review should be the first major written task undertaken by the student and three printed copies must be handed in by the date specified on the Honours Schedule. Early in the course, brief workshops will be held on bibliographic resources and software available in the Life Sciences Computer lab, together with an introduction to the University’s on-line resources for writing and

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1 Earlier editions of this style manual were published by the Australian Government Publishing Service, and it was commonly referred to as the AGPS Style Manual. All recent editions are held in the University libraries, and nearly all of the writing style recommendations of the earlier editions remain the same throughout.
computing skills.

All students should note that you are required to include word counts both inclusive and exclusive of the reference list and in-text citations when submitting your literature review.

The Literature Review will not contribute to the final Honours award but it will be evaluated by School examiners and determined to be acceptable or unacceptable. If acceptable the student will be required only to prepare a corrected Review to the satisfaction of their supervisor. Subsequently this version will be bound with the copies of the Research Thesis that are submitted for hard binding. If unacceptable the student will be given four weeks to produce an acceptable Literature Review; a student who fails to achieve this will be ineligible for an Honours award.

2.3. Grant application

Background

Applying for funding is one of the duties of all professional scientists. Writing such proposals requires a specific set of skills in communication and scientific reasoning. The objectives of this assessable exercise are:

1. to develop the ability to formulate a realistic research proposal;
2. to develop the ability to present convincing arguments that enable the reader to see clearly the scientific merits of the proposal; and
3. to introduce students to the skills necessary to “sell” their ideas to referees on a research committee.

The precise procedures for assessing applications vary between agencies, but nearly all of them use a panel of scientists in addition to specialist referees who may be asked to assess the details of the research plan. Although the assessment panel may consist of scientists with expertise in the general area of the research, it is unlikely that many of them will be specialists in the area covered by the proposal. As a result, grant applications have to satisfy two audiences: the more general assessment panel, but also the specialist referees. It is, therefore, important to realise that the panel assessing your research proposal will probably not be specialists in your field.

Two skills are particularly valuable in assembling a proposal. The first revolves around the ability to frame a tractable question or set of questions that are amenable to scientific investigation. Aims should be clear, and the
The proposed program of research should be designed to address those aims; there should be some sense that progress will be made if the proposal is successful and the research is completed.

The second skill involves the ability to express and justify this research concisely. Sufficient information needs to be included to satisfy specialist referees, but it is crucial that arguments are clearly expressed so that a non-specialist scientist can see the value of, and justification for, the proposed research.

In addition there are very strict limits on the length of grant applications, so it is important to write concisely and clearly.

The proposal

The student will be asked to formulate a research proposal in an area which may be related to, but must not be identical with, their Honours research project. The proposal will be for a one-year project, with a budget limit of $35,000, and the format of the proposal will approximate that of the Institutional Research Grants Scheme (IRGS). A form and guidelines based on (but not identical to) the IRGS will be provided, together with a workshop on writing proposals as identified in the Honours Schedule.

Budgeting information will be simplified for this exercise in that only direct costs will need to be included in the proposal. Additionally, for the purposes of this task (only!), the student is to assume that they will be employed at this University for the duration of the proposal, and so should not apply for money to support their own salary. Staffing (if required) should be restricted to technical or research assistance.

The supervisor will discuss initial ideas with the student and give early feedback. Using this advice the student will prepare a “pre-proposal” using the proforma provided. This pre-proposal will comprise a short (the equivalent of 1-2 A4 pages single spaced) justification of the research idea, giving a brief background, a short project description or plan, and a clear explanation of how the planned project will be novel, original research. A clear statement as to how the planned research is different from or builds on the student’s existing Honours project should also be included.

Three copies of the pre-proposal will be submitted to the School of Zoology Research committee 6 weeks before the deadline for the grant application itself. The research committee will examine the pre-proposal, and approve the idea for further development into a full application and EITHER provide brief feedback to the student, OR provide advice about how to develop or adjust the
proposed idea into a more tractable grant application. This reflects standard practice for most professional scientists, and in this circumstance will be undertaken in consultation with the primary supervisor.

Students will then proceed with developing the full grant application using the modified IRGS proforma and guidelines provided. The supervisor will advise the student initially on the proposal and will direct the student’s attention to weaknesses in the content, writing style, timetabling and budgeting in the first draft of the proposal but will not be involved in detailed editing. A typed original and two copies will be submitted by the specified completion date. Grant applications will be assessed by the School of Zoology Research Committee. The final version of the Grant Application will be submitted through Turnitin (plagiarism detection software) on the same day as the hard copy is submitted. Please include a signed plagiarism coversheet statement with your hard copy submission.

Assessment objectives and criteria

Objective 1  Aims and significance: To develop the ability to identify a tractable question or set of questions and produce arguments that enable the reader to clearly see the specific scientific merits and broader relevance and context of the proposal.

The following assessment standards will apply:

- **D** Poor use of information; key areas of proposal poorly explained; project has little scientific merit;

- **C** Reasonable information base but limited ability to use this information to describe proposed research; project has merit, but the significance of the project is not well justified;

- **B** Demonstrates ability to use relevant information, and re-organise and present that information clearly and concisely; significance of proposal clearly argued;

- **A** Organisation excellent and proposal very well written; the relevance of the proposal to any current debates in the subject area is clearly apparent.

Objective 2. Research plan and budget. To develop the ability to formulate a realistic research programme. The proposal should describe how the questions identified in the aims and significance will be answered.

The following assessment standards will apply:
Limited reasoning ability; clear weaknesses in proposed research plan; budget and/or timetable poorly organised;

D Limited reasoning ability; clear weaknesses in proposed research plan; budget and/or timetable poorly organised;

C Some of the project may not be achievable within the constraints laid down in the guidelines; research plan does not fully support the stated aims of the proposal: either too much extraneous work is proposed or key areas are insufficiently covered; budget and/or timetable may be unrealistic to achieve research aims;

B Research plan has a good chance of addressing the aims, but some aspects of the proposal may be weakly reasoned; budget and/or timetable realistic;

A High scientific rigour of arguments presented to justify research plan; both budget and timetable realistic and justified.

2.4. Seminars

Background

Students will be provided with instruction on the presentation of seminars; each student will give two seminars during the year. Visual aids and other support material for these seminars should be as simple as possible with the emphasis on effective communication. Additional generic information on oral presentations is available on the “Babble” website (log on to MyLO and follow the links from the “Scientific Communication Skills” link).

Dates for the seminars will be set at the start of the course. At the *first seminar each student will speak for about 10 minutes with about 5 minutes allowed for discussion. The corresponding times for the second seminar will be 25 and 10 minutes.

The *first seminar will be given at least 6 weeks after the start of the Honours course and the second will be given approximately one month before the submission of the Research Thesis.

The first seminar does not contribute to the Honours award; its purpose is to introduce the student, enable them to practise oral presentation skills, and solicit feedback from the School about the Research Project. The second seminar is assessed and the assessments will contribute towards the final award as follows.
Assessment objectives and criteria

**Objective 1.** To develop skills in communication and presentation.

The following assessment standards will apply:

- **D** Fails to present information clearly; tends to make frequent errors e.g. becomes inaudible, loses track of argument, becomes lost for words, incoherent;

- **C** Speaks clearly but engages only occasionally with audience; minor and major points poorly distinguished; may lack voice modulation;

- **B** Speaks clearly and makes the talk interesting; good engagement with audience; identifies key points, but some aspects may lack clarity;

- **A** Presents material very effectively and generates high audience interest; seminar is well-structured and balanced so that appropriate weight is given to material according to its complexity; presentation invites substantive discussion.

**Objective 2.** To develop the ability to explore a data set and present its important points to an audience, using appropriate support material.

The following assessment standards will apply:

- **D** Significant material omitted or important aspects of project remain poorly explored; support material inadequate; student fails to interact with material or poor competence with chosen technology;

- **C** Some stages in argument omitted or irrelevant material, such as raw data, included. Presenter only occasionally interacts with slides; may be too many slides, or some shown for too short a time so that some aspects of the data or argument remain poorly explained. Support material may show obvious or distracting flaws, e.g. colour schemes, font sizes etc;

- **B** Generally competent exploration of data and competent presentation; presenter interacts well with support material, which is generally well-produced and supplies required information; may use some unnecessary effects;

- **A** Excellent presentation. Coherent exposition of major arguments and data explored very effectively; each stage clearly explained. Support material very well integrated and synchronised with oral presentation.
**Objective 3.** To develop the capacity to interact with an audience in order to provide clarification or defend a position.

The following assessment standards will apply:

- **D** Uncomfortable; fails to answer questions by prevaricating, mumbling etc; generally exhibits lack of familiarity with his/her material;

- **C** Attempts to answer questions, but does not appear fully in command of the situation, e.g. may show limited appreciation of question, may lack expected information;

- **B** Answers confidently; answers clear and to the point; able to generate audience interest;

- **A** In full control of the situation/audience; excellent command of subject matter.

## 2.5. Research Project

**Background**

All students will be required to undertake an original research project under the supervision of one or more members of the academic staff, and external co-supervisors may also be involved. Scientific staff of TAFI who are not members of the School of Zoology and Research Associates of the School of Zoology may also act as full supervisors with the approval of the Head of School.

Work on the Research Project is usually allowed to start on the **Monday following week 3** of the course, by which time the Literature Review should be well under way. Earlier starts to the Research Project may be necessary owing to the life-cycles of the organisms involved or other reasons, and alternative starting dates need to be negotiated with the Honours Co-ordinator well in advance of the start of the Honours Program. A total of **27 weeks of field and laboratory work is allowed followed by an 8 week period for the production of the Research Thesis.**

The maximum length of thesis will be 25,000 words, including the abstract and in text citations, figure and table captions, but excluding table of contents, references, and appendices. The abstract will be a maximum of 400 words. The supervisor will interact with the student to advise on all aspects and all stages
of thesis preparation.

A penalty will apply to theses which substantially exceed the word limit.

The penalty will apply progressively to the best thesis grades. For example, if an assessment was made at ‘A’ standard on, say, Criterion 3, this will be reduced to a ‘B’. The thesis examining panel will meet and assess the thesis without prejudice, and word limit penalties will subsequently be applied by the honours co-ordinator.

The thesis, including the corrected Literature Review, must be submitted on or before the submission deadline, identified in the Honours Schedule, and will be assessed by a panel of at least three examiners nominated by the School. The examining panel will consist of the School supervisor and two other staff members who were not involved in supervising the project, and may optionally include one co-supervisor from outside the School. Where there is more than one co-supervisor, only one of those should attend the meeting of the examining panel after consulting with the other co-supervisors to represent their views during the examination. This is also the examining panel for the Literature Review and the Research Plan, although co-supervisors are welcome to attend the feedback meeting for the Research Plan.

The School requires that the Thesis, Literature Review and Grant Application all be submitted through Turnitin (plagiarism detection software) on the same day that hard copies are submitted. These will be examined initially by the honours co-ordinator, and in the second instance, if necessary, by the honours supervisor. Please include a signed plagiarism coversheet statement with your hard copy submission.

For submission the following are required by the due date:

1. One unbound copy of the thesis for each member of the examining panel. This will be three or four copies depending on whether the panel includes two co-supervisors.

2. Three additional hard copies of the thesis, with the literature review appended to the back of each, which will be hard bound. One of these copies will be for the candidate, one for the primary (School) supervisor and one for the University library.

3. If any co-supervisors or funding partners require soft- or hard-bound copies, then additional copies for binding will be needed to be submitted at the same time; costs of these additional copies will be negotiated with the primary (School) supervisor.
4. One electronic copy of the thesis, literature review, grant application in an editable format, and references (preferably in Endnote) will be lodged with the primary (School) supervisor.

5. Any additional electronic or hard copies as required by external agencies (e.g. to meet permit requirements or funding agreements). The School of Zoology does not commit to funding hard copies for these purposes, and would expect that secure electronic copies (e.g. portable document format files) would suffice for these purposes.

6. A documented, final set of data files should be submitted to the primary supervisor at the time of submitting the thesis on an optical medium (e.g. CD-ROM). Data must not be left on hard drives of Honours computers, since these will need to be made available to successive students. The primary supervisor is to liaise with any co-supervisors or other external bodies requiring the data set, subject to University Intellectual Property policies.

In the interests of ensuring that the bound thesis is submitted and the degree can be awarded, corrections to the thesis are not normally required. This means that the final thesis lodged with the University will reflect the grade awarded.

It is a requirement that all data has been lodged with the primary supervisor, that files have been backed up and removed from School computers, that work areas have been cleaned, equipment returned in good repair, and that keys have been returned. **Recommended awards will not be communicated to Student Administration if these tasks have not been completed to the satisfaction of the primary (School) supervisor.**

**Assessment objectives and criteria**

The purpose the Research Project involves 6 objectives, and there are two assessment grades for each objective.

**Objective 1.** The demonstration of initiative and leadership in project management. This includes the ability to accommodate unforeseen events during the project, and the ability to manage time and resources within the clearly defined constraints of an Honours research project.

The following assessment standards will apply:
Objective 2. The development of a scientific data base using appropriate techniques.

The phrase ‘data base’ refers to all data generated by the student. This may involve primary data collected by the student in the field or laboratory, or the identification and development of derived data from a data base collected by someone else (e.g. a long-term monitoring program), or the development of data as part of a theoretical modelling project (e.g. data generated from computer models).

The following assessment standards will apply:

D Data base shows serious inadequacies or limitations; usually weaknesses in both quality and quantity of data apparent;

C Reasonable data base but limitations may be found in either quality or quantity; or the techniques employed may not be the most appropriate; or the derivation of data may show limited insight;

B Data base good and technically competent; appropriate techniques for collection or derivation have been employed;

A Excellent data base of very high quality; unreasonable to expect better quality or quantity in the time available.

Objective 3. The analysis and interpretation of scientific results.

The following assessment standards will apply:
D Little analysis of results and interpretation may contain errors;

C Analysis fairly limited; interpretation acceptable but may fail to qualify conclusions when required or miss full significance of results;

B analysis is competent and interpretation sound; where appropriate, conclusions are suitably qualified;

A Analysis and interpretation maximise the information content of the results; interpretation demonstrates mastery of techniques used.

Objective 4. The reporting of scientific information, using an appropriate range of techniques. This includes the structure of the thesis, cross-referencing, the logical sequence of sections and the integration of both qualitative and quantitative results.

The following assessment standards will apply:

D Presentation generally unattractive and uninformative; overall presentation of thesis disappointing;

C Presentation conveys information adequately but not always in the form most helpful to the reader;

B Competent presentation of material with good integration between text and support material; no repetition or inclusion of unnecessary or distracting material;

A Presentation of a high quality with excellent integration of text and support material; relationships between different aspects of the investigation are readily apparent.

Objective 5. The discussion of the results and conclusions that arise from a scientific investigation in terms of their relationships to the biological principle(s) involved, relevant published work, and the biology of the animal(s) that were studied.

The following assessment standards will apply:

D Student does little more than present own data with little interpretation and poorly related statements about relevant published work; arguments are naive and exhibit limited understanding of the field of study;
C Student able to draw conclusions from his/her own work and to place these conclusions in the context of published work in a straightforward, but relatively unsophisticated, fashion; discussions tend to remain within the immediate field of study and indicate that the student has a fairly restricted knowledge or understanding of his/her subject;

B Student presents original ideas and/or arguments and is able to deal with complex material; where appropriate, relevant material from outside the immediate field of study is utilised;

A Student is able to present original ideas and/or arguments lucidly and shows a high level of ability in handling complex arguments; often evidence of wide reading but the student must be able to use such additional information to generate and/or support his/her arguments.

Objective 6. The presentation of scientific research, using effective, written English. This includes the use of language, grammar and style appropriate to reporting research results in primary, peer-reviewed scientific journals.

The following assessment standards will apply:

D Major arguments often hard to follow because of poor construction of sentences and paragraphs; frequent deviations from acceptable grammatical norms for scientific prose (e.g. poor punctuation and grammar, overuse of acronyms, inappropriate use of vernacular English that leads to ambiguity).

C Some grammatical errors, but these do not obscure major arguments; some sentences and paragraphs lack clarity at times or linkages between some paragraphs may be obscure; prose may be verbose in places.

B Ideas clearly presented in logical sequences; paragraph construction is sound, and linkages between paragraphs are clear; prose may still need editing to achieve professional levels of conciseness and consistency.

A Professional level of writing; concise, clear and consistent scientific prose style; excellent construction of sentences and paragraphs prevail through most of the thesis.

2.6. Oral examination

Occasionally a student may be asked to discuss aspects of their performance, with regard to any part of the Honours course, with the relevant examiners. This may be done in an informal or formal setting and the School reserves its
right to use oral examinations in whatever it considers to be appropriate circumstances.

3. Special Training Programs

In considering the objectives of its Honours course the School of Zoology has identified a number of areas of general, as opposed to specifically zoological, importance in which training or information is required. Arrangements in these areas will generally be based on the needs of individual students although some activities may involve the whole class. The following items have been identified in this regard.

3.1. Occupational Health & Safety

The School’s Occupational Health and Safety Officer (Mr Simon Talbot) must discuss Occupational Health & Safety issues with all students prior to commencement of their research work. All students must ensure that they have read the School’s Field Operations Manual and any OHS policies and procedures relevant to their research project. A current workplace first aid qualification or equivalent is usually compulsory for all staff and students, and the OHS Officer will advise of the availability of such courses for those that need to undertake them.

3.2. Animal Ethics

All Honours students are required to attend an Animal Ethics training workshop as conducted by the University of Tasmania’s Animal Ethics Committee (AEC). This requirement applies irrespective of whether the research project involves use of animals under the purview of the AEC.

3.3. Writing skills

In addition to the training provided by the supervisor during the preparation of the Literature Review, students will be made aware of the on-line resources available to support scientific writing skills (via the “Scribble” website: log onto MyLO and follow the links from the “Scientific Communication Skills” link). Additional workshops can be arranged with the Flexible Education Unit.
3.4. **Data management skills**

Electronic copies of a self-paced tutorial for managing simple data files via Microsoft Excel will be made available. Face-to-face tutorial sessions may be organised if demand is sufficient.

3.5. **Writing research proposals**

A workshop and supporting materials on how to write a research proposal will be provided as advised in the Honours Schedule.

3.6. **Seminar skills**

Students will attend a tutorial on seminar technique, which will include advice on style of presentation, preparation and use of audio-visual material etc.; supervisors will attend seminar rehearsals and provide advice.

For further training on good (and sometimes bad!) seminars, all Honours students are required to attend School seminars unless they are absent because of field work or illness.

3.7. **School equipment**

New students will be given a short walk-about tour of School facilities; information will be provided on planning for field-work, permit requirements and application procedures, and School policies and procedures. Students should refer to the School of Zoology’s *Help Manual* for further, detailed information.

3.8. **Library facilities**

A tutorial on the use of library resources will be provided if needed. This will develop skills acquired in undergraduate courses.

3.9. **Presentation of material**

Supervisors will provide advice on thesis production; this will include such matters as the preparation and presentation of illustrations, planning thesis structure, organising format, presentation of references, use of appendices, etc.
3.10. *Use of School vehicles*

There are two things students must do before they are allowed to use the School’s vehicles:

1. Students must complete an Insurance Declaration Form and return it to the Laboratory Manager (Mr Barry Rumbold); and

2. Students must undertake the School’s training course for 4WD vehicles. Times and details will be organised early in the Honours year and the course will take place before the scheduled start of their project work.

A list of booking instructions is provided next to the photocopier. Students should read these carefully since failure to observe them may result in loss of access to School vehicles.

3.11. *Teaching opportunities*

The School may have casual vacancies for demonstrating or other teaching opportunities for undergraduate classes. Teaching duties are **not** required for successful completion of an Honours degree, and the School is not obliged to offer teaching opportunities to Honours students. To participate in casual teaching, candidates must complete the approved School accreditation workshop and be prepared to uphold the required standards of teaching and behaviour. Usually the accreditation workshop is held once per year in February shortly before the start of Semester 1.

4. **Deadlines**

4.1. *Requests for extensions*

Although requests for extensions of time will not be granted automatically, **genuine cases of difficulty will be treated sympathetically.** Students and supervisors should note that minor delays are part of any normal scientific research, and that the Schedule has been designed to allow for such minor problems. A student’s ability to deal with such issues is part of the assessment for the first the assessment objective of the Research Project. Supervisors are also asked to ensure that their work schedules allow for timely return of material for comments, and that they keep their students fully informed of planned absences. Students who wish to request an extension to any of their deadlines should first seek the advice of their supervisor, then present a
written request\textsuperscript{2} to the Honours Co-ordinator; reasons must be provided and requests based on medical grounds must be accompanied by a medical certificate\textsuperscript{3}. Supervisors must approve requests to indicate their support. The grounds for an extension are treated in strictest confidence, unless the student indicates otherwise. Straightforward requests will be dealt with by the Honours Co-ordinator who will notify School staff and the student of any amendments to the student’s timetable. In other cases the Honours Co-ordinator will place the request, together with a recommendation for action, before the Head of School and may need to seek approval from a full staff meeting; the student will be informed of the decision, and any consequent timetable changes, as soon as possible. In cases where an extension to the thesis deadline has been requested, students should note that this will nearly always mean that the thesis may not be examined and the result finalised prior to the due date for the next graduation ceremony.

4.2. \textit{Late submission of theses}

The School has a very clear policy on the late submission of theses. The deadline for thesis submission is 5:00 pm on the nominated final submission day. Theses submitted after the deadline will immediately be penalized by one criterion grade; after that the penalty will be one criterion grade every two days. The penalty will apply progressively to the best thesis grades. For example, if an assessment was made at ‘A’ standard on, say, Criterion 3, this will be reduced to a ‘B’. Students should note that this could have the effect of moving a student from the lower third of First Class into the Upper Second category in as little as three days. The thesis examining panel will meet and assess the thesis without prejudice, and late penalties will subsequently be applied by the honours co-ordinator.

4.3. \textit{Plagiarism}

Students are reminded that plagiarism is a serious academic offence (see the University’s policy at \url{http://www.utas.edu.au/plagiarism/}). Electronic copies of thesis, literature review and grant application will be submitted to plagiarism detection software, as well as the thesis being scrutinised by the

\textsuperscript{2} Via e-mail will suffice.

\textsuperscript{3} Students should note that the Honours program allows for up to one week’s absence for minor ailments such as colds, hay fever, sprains etc. Medical certificates for less than one week will not normally warrant an extension.
examiners. If significant plagiarism is detected by these or any other means it will be treated very seriously indeed, and will be referred through the University’s processes for dealing with this issue. Serious cases of plagiarism can lead to a student becoming ineligible for an Honours award.

5. **The conversion of assessments to awards**

In order to obtain an Honours degree in Zoology a student must first meet the eligibility requirements identified below; the level of award is then determined by the combination of assessments achieved for each of the 11 assessed teaching objectives. In order to provide the balance in importance between the research proposal, seminars and research project that the School considers is appropriate, the first of the seminar assessments and each of the research project assessments will count double, providing a total of 17 assessments (2 from the Research Proposal; 3 from the Final Seminar; 12 from the Research Project). The minimum requirements for each of the four available Honours awards are detailed below.

5.1. **Eligibility**

In order to be eligible for *any* honours award a student must:

- attend all required training programs;
- produce an acceptable Literature Review;
- complete all scheduled work;
- present at least three hardbound copies of an Honours Thesis with one copy to be retained by the student. The Honours Thesis will consist of the final Research Thesis together with a corrected Literature Review; note that additional copies of the thesis may need to be presented to satisfy permit requirements;
- present a CD containing a complete copy of the thesis and all associated data files;
- clean up work areas and return items of School equipment to the satisfaction of the supervisor and relevant technical staff;
5.2. **Minimum Requirements for a third class Honours degree**

The third class degree identifies the minimum “Pass” standard of achievement that the School recognises at Honours level.

In addition to meeting the eligibility requirements a student must obtain at least 8 assessments at the C standard or better, including at least 4 from the research project all 4 of which must come from Objectives 1 to 5 inclusive; the 9 remaining assessments will be at D standard.

5.3. **Minimum Requirements for a lower second class Honours degree**

The second lowers degree represents what the School regards as a “Credit” standard of performance at Honours level.

In addition to meeting the eligibility requirements a student must obtain a minimum of 4 assessments at the B standard or better together with a further 10 assessments at C standard; at least 2 of the B assessments must be from the research project both of which should come from Objectives 1 to 5 inclusive.

5.4. **Minimum Requirements for an upper second class Honours degree**

The second uppers degree represents “Distinction” standard performance in the Honours program.

In addition to the eligibility requirements a student must obtain a minimum of 10 assessments at the B standard or better, at least 5 of which must be from the research project; only in exceptional circumstances will an assessment at the D standard be allowed.

5.5. **Minimum Requirements for a first class Honours degree**

The first class honours degree is available for exceptional performance only, but still encompasses a reasonably broad range of achievement.
In addition to the eligibility requirements a student must obtain a minimum of 8 assessments at the A standard, at least 4 of which must be from the research project; no more than 2 of the remaining assessments may be at the C standard, and only in very exceptional circumstances will an assessment at the D standard be allowed.

Dr Scott Carver

Lecturer, Wildlife Ecology

http://www.utas.edu.au/zoology/people/scott-carver

Tel: 03 6226 2794; Fax 03 6226

E-mail: scott.carver@utas.edu.au

My research emphasizes factors that underpin community dynamics and the ecology of infectious diseases across natural and anthropogenic environments.

I am enthusiastic to speak with students interested in pursuing honours among these areas, and who have strong interests in developing their analytical expertise. I am also open to discussing novel projects that students may have interests in developing. Some potential honours project questions include:

1. How does seasonality in reproductive cycles of mosquitoes and marsupials can produce annual, multi-annual and steady patterns of Ross River virus dynamics?

2. How does distance to urban-wildland boundaries influences patterns of pathogen exposure and infection in wild and domestic felids in North America?

3. Do resources govern competition among micro-crustaceans and vectors of Ross River virus?

My research emphasizes factors that underpin community dynamics and the ecology of infectious diseases across natural and anthropogenic environments. My research interests are multidisciplinary and include integration of ecological, conservation, epidemiological, veterinary and medical research fields. My interests in ecological processes that structure pathogen transmission enable me to address critical issues, such as determinants of
changes in transmission, and control and emergence of virulent infectious
diseases among wildlife, domestic animals and humans. My research is not
restricted to any particular taxon, though it has tended to focus on the roles of
terrestrial vertebrates and aquatic fauna in the ecology of infectious diseases.
The outcomes of my research have fundamental relevance for the conservation
and health of wildlife and ecosystems, and the health of humans.

My research program spans a range of systems in Australia and North
America and includes collaborations at UTAS, Colorado State University, the
U.S. Centers for Disease Control and Prevention, and Montana Tech of the
University of Montana. Locally, I am interested in: 1) how trophic interactions
among aquatic fauna influence mosquito vectors of Ross River virus and
ultimately the potential for human infections, 2) how marsupial host
demographics influences the dynamics of Ross River virus among marsupials
and humans, 3) the effects of introduced domestic cats and toxoplasmosis on
wildlife, domestic animals and humans, 4) impacts of sarcoptic mange on
wombats, 5) the ecology and impact of platypus Mucormycosis in Tasmania,
6) the ecology and impact of Koala retrovirus, and 7) mechanisms that
underscore pathogenesis of Tasmanian Devil Facial Tumour Disease. At an
international level my research interests extend to: 1) the effects of
urbanization on pathogens shared among mountain lions, bobcats and feral
domestic cats, 2) within host dynamics of retrovirus infection, utilizing model
systems for HIV, 3) the dynamics of small mammal populations and a zoonotic
hantavirus, and 4) utilizing models to predict dengue cases within cities in
Brazil.

Selected publications:

Carver, S., A. V. Scorza, S. N. Bevins, S. P. D. Riley, K. R. Crooks, S.
VandeWoude, and M. R. Lappin. 2012. Zoonotic parasites of bobcats
around human landscapes. Journal of Clinical Microbiology
50:3080-3083.

Epidemiology and Infection 140:359-371.


