Welcome to the Honours Course in the
School Chemistry & Biochemistry

We hope that you will enjoy your Honours year, and that it will serve as a good introduction to life as a research scientist. The Honours year is an exciting experience, as it provides an opportunity to learn a range of new skills in the environment of a research laboratory. You will be stimulated to think for yourself, to design and execute your own experiments and to communicate your results and ideas to others, both in written and oral form. We believe that although it will be a challenging year, it will be one of the most important in your educational and personal development.

The Honours booklet describes the structure of your Honours course, and how you will be assessed during the year. In addition, it offers advice on how to be successful and provides details of our staff who will be supporting you throughout the year. On behalf of the Honours Co-ordinators, supervisors and professional support staff, we wish you well for your studies.

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# TABLE OF CONTENTS

COURSE OBJECTIVES ................................................................. 3
HONOURS GRADES ................................................................. 4
HONOURS ASSESSMENT .......................................................... 6
GENERAL INFORMATION ......................................................... 10
SEMESTER 1 INTAKE ASSESSMENT TIMETABLE ..................... 11
SEMESTER 2 INTAKE ASSESSMENT TIMETABLE ..................... 12
STAFF INVOLVED IN HONOURS ........................................... 13
PREPARING YOUR HONOURS THESIS ..................................... 15
STUDENT RESPONSIBILITIES ................................................. 19
SUPERVISORS’ RESPONSIBILITIES ........................................ 21
HINTS AND GUIDELINES FOR HONOURS WORK .................... 21
APPLYING FOR POSTGRADUATE SCHOLARSHIPS .................... 25

## APPENDICIES

- **APPENDIX 1**  GUIDELINES ON RESEARCH ETHICS AND RESEARCH CONDUCT .......... 26
- **APPENDIX 2**  RESEARCH PROPOSAL SEMINAR - ASSESSMENT SHEET ...................... 27
- **APPENDIX 2 A**  UNRELATED SEMINAR - ASSESSMENT SHEET ..................................... 28
- **APPENDIX 2 B**  THESIS TOPIC SEMINAR - ASSESSMENT SHEET ................................. 29
- **APPENDIX 3**  GUIDELINES FOR CONDUCT AND ASSESSMENT OF THE ORAL DEFENCE.... 30
- **APPENDIX 3 A**  HONOURS ORAL DEFENCE ASSESSMENT SHEET ................................. 31
- **APPENDIX 4**  HONOURS – SUPERVISOR’S ASSESSMENT SHEET .................................. 32
- **APPENDIX 5**  GUIDELINES FOR THE ASSESSMENT OF THE LITERATURE REVIEW / THESIS .................................................. 33
- **APPENDIX 5 A**  HONOURS LITERATURE REVIEW ASSESSMENT SHEET ..................... 34
- **APPENDIX 5 B**  HONOURS THESIS ASSESSMENT ...................................................... 35
- **APPENDIX 6**  HONOURS EXIT SURVEY FORM 2013 .................................................. 37
- **APPENDIX 7**  ASSIGNMENT & REPORT COVERSHEET ............................................ 39
- **APPENDIX 8**  UNIT CODES FOR ENROLLMENT IN THE HONOURS PROGRAM ............. 40
COURSE OBJECTIVES

The Honours course in the School of Chemistry & Biochemistry has been designed to introduce students to the manner in which original scientific research should be undertaken, and to assist students to develop the skills required. However, it should be noted that despite undertaking a research project in a particular discipline, some skills acquired will also be generic and have value in establishing careers in other areas. The Honours course consists of a range of assessments (essays, seminars, oral examination, etc.) together with supervised full-time research, which is presented for evaluation as a thesis. The course has the following aims:

a) To extend knowledge and understanding of your chosen discipline.

The first, second and third year undergraduate units in your chosen discipline provide the basis for your Honours year. Extending and utilising the knowledge gained in these years represents an integral component of your Honours course and is achieved through your research project and by the following, all of which are compulsory:

- A thesis-unrelated seminar, and written summary of the topic being presented;
- Participation and attendance at discipline seminars;
- Individual reading;
- Informal discussion with staff and students in and outside your cognate discipline.

b) To provide training in solving scientific problems

In any job or research project, you will most likely be concerned with finding answers to specific questions that have been posed by you and your supervisor. Your literature review and project work will form the basis of your training in these areas. This will be achieved in the following way:

- Defining the objective(s)
  This involves understanding the background to the particular objective(s). You must be fully and critically aware of existing knowledge (the literature) and the relationships between your specific goals and this existing body of knowledge. Often (and usually in the biological sciences), the definition of the objective(s) is expressed as a hypothesis. Experimental work is conceived and designed in consultation with your supervisor and then undertaken to test the hypothesis.

- Asking the appropriate questions
  It is important to establish what approaches, techniques and equipment are required to address the investigation of a particular hypothesis/objective. If research is undertaken without carefully defining and analysing the questions to be asked, the information gathered is often inconclusive. It is important to learn how to precisely formulate questions of interest. Complicated questions must be broken down into smaller parts, otherwise the experiments may lead to un-interpretable results.

- Knowing how to get valid answers to questions
  This involves understanding experimental design (tests, controls, etc.), the capabilities and limitations of the techniques available, and the procedures for interpreting results, including when it is appropriate to use statistics, and which statistics should be used.
c) To encourage you to think critically and to challenge ideas and concepts in the literature

The advancement of science, and the evolution of ideas, comes from the acquisition and interpretation of new data. The Honours course provides an opportunity to develop the skills required to critically evaluate experimental data and methods for the questioning of scientific dogma.

d) To provide training in associated skills

Many of the skills needed by professional scientists lie outside the bounds of their discipline *per se*. For example, it is necessary to develop skills in the use of computer-based literature search systems, word-processing and other common computer programs necessary to evaluate data. Communication skills are also essential in science, and there is a requirement to become skilled in scientific writing and in the presentation of seminars. These skills are essential attributes of a good scientist and a deficiency in these areas may limit your ability to progress. Because of their importance, specific components to develop these skills are included in your Honours program.

**HONOURS GRADES**

The following criteria are used to determine your final grade. The characteristics of each grade are provided in some detail so that you will be able to understand the necessary elements contributing to your final grade.

- **1st Class Honours (H1)**
  - High 90 - 100%
  - Middle 85 - 89%
  - Low 80 - 84%

- **2nd Class Honours (H2A or H2B)**
  - 2A High 75 - 79%
  - Low 70 - 74%
  - 2B 60 - 69%

- **3rd Class Honours** 50 - 59%
- **Fail** < 50%

**H1: High (90-100):** For a body of work rated by the School as outstanding. This includes the demonstration of excellence in terms of conceptualisation, theoretical framework or analysis of previous empirical research leading to the derivation of the objectives/hypotheses described in the introduction to the thesis, the demonstrable use of rigorous and/or innovative methodology, a mastery of data treatment methods and presentation of the results, the capacity to discuss the results in an analytic manner, the skilful treatment of unexpected or inconsistent results, or a recognition of some limitation of the methodology, and integration of the findings within the theoretical framework or empirical background outlined in the introduction or an alternative framework, if appropriate, excellent written expression, organisation and format of thesis, and arguments presented coherently and with clarity at the thesis oral defence and at seminars.

**H1: Middle (85-89):** For a body of work rated by the School as predominantly outstanding, but with some minor weakness. This weakness could be in the presentation, both written and oral, or in the structure, or some slight inconsistency or oversight in written arguments or arguments in response to questions in the thesis oral defence, or it could be a weakness in the thesis discussion that does not fully exploit the findings or links with theory or previous research.
H1: Low (80-84): For a body of work rated by the School as excellent, particularly with respect to conceptualisation and data treatment. One or two of the following: scientific communication, theoretical framework or methodology, may be rated as good.

H2A: High (75-79): For a consistent body of work, rated by the School as predominantly good. Some aspects of the thesis may be rated as satisfactory, but these are offset by some excellent features. Conceptualisation and data treatment may not be particularly strong but scientific communication, theoretical framework and methodology should be sound (rated as good). For example, there may be an inability to discuss results within the broader context of the literature.

H2A: Low (70-74): For a body of work rated by the School as predominantly satisfactory. There may be weaknesses in conceptualisation and data treatment. For example, there may be an inability to recognise the limitations of the methodology (rated as needing improvement). Scientific communication, theoretical framework and methodology will generally be rated as satisfactory.

H2B: (60-69): For a body of work judged by the School to possess critical misconceptions, inconsistencies or omissions in more than one area, including incorrect interpretation of the results and an inability to recognise the limitations of the methodology. These deficiencies will be evident in several of the assessments associated with the thesis including the oral defence. Application to work in the laboratory may be weak or inconsistent.

H3: Pass (50-59): For a body of work judged by the School to contain misconceptions, inconsistencies, misinterpretation and omissions, including unrecognised deficiencies in methodology, and lack of integration of findings into a theoretical or empirical framework. A lack of attendance or productivity may be a contributing factor. These deficiencies will be also apparent in the thesis oral defence.

Fail: N+ (<50): For a body of work with major problems in conceptualisation, execution and application.

While a First Class Honours degree is awarded for excellent to outstanding work, the acquisition of an Honours 2A is a very good outcome to your Honours year. It is equivalent to a distinction in an undergraduate unit and such a result is an indication that the examiners were convinced that the student was competent at research and could complete a higher research degree. In this regard, a 2A would not necessarily bar a student from obtaining a UWA Postgraduate Research Scholarship (although it would preclude an Australian Postgraduate Award). Indeed, in recent years a relatively large number of Honours students in the School who were awarded an upper 2A received scholarship offers.

An Honours 2B result, equivalent to a credit in an undergraduate unit, indicates that the examiners held a degree of uncertainty about the candidate’s research potential as demonstrated by the work presented. It is still a very worthwhile outcome and some notable researchers have started their careers with a 2B Honours. However, several years of additional research experience would be recommended before the holder of a 2B Honours should enrol in a PhD program.

A 3rd Class Honours, equivalent to a pass grade on the undergraduate scale, suggests that, in the examiners’ opinion, the candidate may not be well suited to a research career at this point in time.

Most employers who do not require research specific skills accept any grade of Honours degree as clear evidence that student has attained a high level of training, including the ability to work independently and to meet deadlines.
HONOURS ASSESSMENT

Breakdown of Marks

The following table outlines the breakdown of marks for each of the assessments contributing to your Honours final grade. The Honours year consists of two units that run over both semesters - one for the development of oral and written skills, and the other for the development of research skills (i.e., experimental work and thesis).

A) Hons Written and Oral Skills Part I and Part II - 12pts

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</tr>
<tr>
<td>Writing assignment – Abstract for 2nd seminar</td>
<td>2.5</td>
</tr>
<tr>
<td>Thesis Literature Review</td>
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</tr>
<tr>
<td>2nd Seminar – Thesis Unrelated Topic</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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B) Hons Research Project/Scientific Research Skills Part I and Part II - 36pts

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<th>Points</th>
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</thead>
<tbody>
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<td>Thesis: <strong>Presentation</strong></td>
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</tr>
<tr>
<td><strong>Content</strong></td>
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</tr>
<tr>
<td><strong>Discussion</strong></td>
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</tr>
<tr>
<td>3rd Seminar – thesis related</td>
<td>10.0</td>
</tr>
<tr>
<td>Oral Defence</td>
<td>10.0</td>
</tr>
<tr>
<td>Supervisor’s Assessment</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>75.0</strong></td>
</tr>
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A. Written and Oral Skills (12 pts)

Literature Review for the Thesis (12.5%)

The typed Literature Review of your thesis topic must be between 4,500 and 6,000 words in length (excluding references and figures) and, to this end, you must provide an accurate word count on your title page. Note that with reviews in excess of 6,000 words, only the first 6,000 will be considered for marking. The format should be exactly the same as that required for the final thesis namely, in 12pt Times New Roman font, double spaced with a 4cm left hand margin, and 2cm for the other margins, with numbered pages. The format for the references is as described for the thesis (see page 17).

You should discuss the overall content of the Literature Review and its layout with your supervisor/s before starting to write it, as well as during the writing process. He/she will provide you with advice about the scope of the project, the appropriate depth and breadth of your review, the areas to focus on or avoid, the techniques to be used and the likely outcomes of your project.

The review must be written with care so it is free of typographical and grammatical errors, as well as plagiarised material (see page 18). It should be clear and concise, and encompass information which is directly relevant to your project. It should present sufficient background to the study to enable a reader to see how your project is placed in the context of what is already established. It should discuss what is not known and what is of particular interest in the field and, thus, justify the
project aims. It should be logically set out (including appropriate headings) and organised so that the rationale for the project is clear. Your review should be referenced so that the facts are appropriately supported by documented evidence in the literature and it should conclude with a section outlining the experimental approach/techniques to be used, the anticipated outcomes and the significance of the planned study. You are advised to look at previous Honours Students’ theses.

The Literature Review will be marked by two thesis examiners who will be appointed at the beginning of your Honours year (they will also be involved in your progress reports). They will use a specific marking guide, which allocates marks for presentation (20) and content (80). Your examiners will be instructed to return the marked Literature Review to the Honours Coordinator within three weeks of the submission date in accordance with University Policy to ensure you receive feedback in a timely fashion. In addition to providing a mark for your Literature Review, each examiner will provide feedback on your scientific writing, as well as content, and indicate the strengths and the weaknesses of your work in relation to the specified learning outcomes. Your supervisor will also receive a copy of your Literature Review and he/she will provide you with comments and corrections after it has been marked. It will then form the basis of the Introduction for your thesis. However, it may need to be altered later in the year if your project moves in a different direction. It will not be remarked per se, although it will be assessed as part of your final thesis. The feedback you receive from your examiners and supervisor/s will form an important part of your education in scientific writing. You are expected to use this feedback, together with ongoing input from your supervisor, in the development of your written communication skills.

Four copies of the literature review must be handed in, with a single signed assignment coversheet (Appendix 7), to the appropriate Discipline administrative assistant by the due date. Please note that failure to submit the assignment by the date provided will incur a penalty of 5% of the essay mark per day late as per Faculty guidelines. You are, therefore, advised to prepare the Literature Review well in advance of the submission date.

Seminars

Each student will deliver three seminars during the year:

- **Research Proposal Seminar (1st Seminar, formative only):** This will be assessed but the mark awarded will not be recorded. It is solely concerned with the project topic and will be of 15 minutes duration. You should be prepared for questions in this period (4 to 5 minutes). You should practice your seminar in front of your supervisor and other students so that you may receive guidance and feedback. The seminar should include the background information to your research topic and outline your plans for the year’s work. Do not forget to use the ‘information addressing oral presentation skills’ provided to you in the early part of your course.

- **Seminar on Unrelated Topic (2nd Seminar, 10% of your final mark):** This seminar will be of 20 minutes duration followed by 10 minutes for questions, and will be on a topic unrelated to the project area you are working in. It is designed to extend your understanding and your knowledge of your discipline. It will be assessed by academic staff members attending the seminar, on the basis of content, style of delivery, clarity and the handling of questions. You must also prepare a two page summary of the talk, which will be marked (2.5% of your final mark) by a small panel of academic staff. The Summary will be distributed to the audience at the seminar.

- **Research Seminar (3rd seminar, 10% of your final mark):** This seminar will be of 20 minutes duration followed by 10 minutes for questions, and will be a presentation of the results obtained from your research work during the year and will occur after the final thesis is submitted. It should include some background information but the bulk of it should be
concerned with the results that you have obtained. You should be prepared for questions about the background, the methodology used, the results obtained and possible future directions of the research described. It will be assessed by staff members attending the seminar.

When delivering your seminars, remember to speak slowly and clearly, and try NOT to read from your notes as this gives the impression that you are unsure of the material being presented.

Abstract of Unrelated Topic Seminar (2.5%)

This assessment is meant to simulate the process of preparing an abstract for a conference. The assessment provides formative experience in communicating scientific information via text. However, it is also summative in that marks will be awarded, although they represent a small fraction of the final mark. The Abstract will comprise the title of your second seminar, your name and student number, a brief introduction to the topic that constitutes your seminar, followed by appropriate brief presentation of the topic that you will focus on in your seminar. The final paragraph should be a concluding one, summarizing the main points that will be gleaned from your seminar. Four hard copies must be submitted together with a signed assignment cover sheet and a pdf copy emailed at the same time, to your Honours Co-ordinator by the due date. You may include pertinent references so that anybody interested in your topic will be directed to the appropriate literature. The page limit is a single A4 page, including the references. You may include figures but these will be counted within the page limit. Your Abstract will be marked by academic staff, for presentation, clarity, logical flow, succinctness, accuracy and grammar. You are encouraged to meet with the academic staff member nominating the topic, before expending too much effort in its construction so that you are clear you are on the right path. However, this must be undertaken early so that the feedback can be given in a timely fashion.

B. Research Project/Scientific Research Skills (36pts)

The Thesis

The research work undertaken during the year should be presented as a type-written thesis (50% of final mark) according to the approved format. The scientific layout and format for submitting your thesis is detailed later in this booklet. The format for those students undertaking Honours in Chemistry, Forensic Chemistry and Nanotechnology may vary slightly but the marks awarded will be the same as those for the other disciplines within the School. Four copies must be submitted (5 copies if you have 2 supervisors), accompanied by a signed assignment coversheet.

Thesis Progress Report

It is your responsibility to submit a pdf copy via email of your research progress report to your Honours Co-ordinator by the due date. The report can be up to seven pages long and include a brief introduction, the aims of the project, an outline of methods used (where these are non-standard), results, and data obtained in the form of tables and/or figures, some analysis/comments/conclusions and an outline of the further work you plan to do as well as detailing problems, if any. You should discuss the content in detail with your supervisor prior to submission. In this regard, your supervisor should provide detailed instructions on how to construct and present a report of this kind. He/She may also preview your work and provide comment. This will be distributed to your supervisor/s and examiners. It is your responsibility to then arrange a formative meeting with your supervisor/s and your examiners to discuss progress. The report is not marked and will not be used in any assessment process. However, one of its main aims is to assist you in your research, and the examiners will provide you with general comments as well as suggestions for future work. Make sure that you outline any problems or difficulties that you are encountering with your work at this time. The other aim of the meeting is to provide an opportunity to practice your oral defence skills. To this end, the meeting will be structured like an informal oral defence, with your examiners (but not supervisors,
whose job it is to Chair the meeting rather than contribute to it) asking questions about your project and the data presented. As this meeting is informal, there will be more discussion between everyone present than usually occurs at the actual oral defence. You may be asked to give a brief presentation of less than 5 minutes duration at the beginning of the session - you will be advised if this is the case by your supervisor.

**Oral Defence**

After the submission of your thesis and presentation of your final seminar, you will be required to attend a thesis-related oral defence (10% of your final mark). At this session, you will be interviewed by a small panel (your supervisor/s, thesis examiners, Honours co-ordinator and Head of Discipline and/or other staff members as comparators) about your thesis. Your Honours Co-ordinator will advise you in a timely fashion when you should report for your oral defence. Up to forty minutes will be allocated. It will begin with some general questions (3–5 minutes) about the Honours course, after which, your Honours Co-ordinator will invite the examiners and supervisor/s to ask you a number of questions relating to all aspects of your thesis (approximately 30 minutes). **Accordingly, it is a requirement that you bring a copy of your thesis, together with any appropriate lab books to the oral defence for ready access.**

The Honours Co-ordinator will usually chair the oral defence and ensure that you are allocated about the same number of questions as all other students. You will be asked about your understanding of the research you have undertaken during the year, as presented in your thesis, and questions may relate to technical aspects, to background information, and to the implications of your research discussion. Examiners’ guidelines for conduct and assessment of oral defence are provided for your information in Appendix 3. (Also see Appendix 3A).

At the end of the questioning, you will be given the opportunity to revise any of your answers. After you have left, the Chair of the panel will invite members to comment on the accuracy of your answers before your oral defence is marked. However, whilst your supervisor may comment on your performance, they will not provide a mark. Copies of your thesis with corrections usually written in them will be returned, and corrections should be completed after discussion with your supervisor/s. Corrected copies should be returned to your Discipline administrative assistant by the date stated in the relevant Assessment Timetable, together with a CD containing a pdf copy of your thesis.

**Supervisor's Assessment**

Supervisors will provide a general assessment (5% of your final mark) reflecting their opinion of your productivity, capacity for independent thought, laboratory skills, thoroughness and attitude to research work, communication skills and analytical ability demonstrated throughout the year. This assessment may also be used as a guide to your research potential when your postgraduate scholarship application is assessed by the School. Supervisors’ guidelines for this assessment are provided for your information in Appendix 4.
GENERAL INFORMATION

Attendance at all Discipline seminars is obligatory, and will be recorded.
Although attendance will not result in a mark contributing to your final assessment, it is considered part of your formative training in your chosen Discipline. You must notify the Discipline Honours Co-ordinator or Deputy Co-ordinator by email to provide a cogent reason if you are unable to attend a seminar. The need to perform an experiment is an acceptable excuse only if there are time constraints on the procedure or some other specific reason why it must be done at that time; but you should plan your work around the seminar program. Attendance at seminars occurring in the last two weeks of write-up time is optional.

For Genetics Honours students: Due to the diverse nature of the discipline, you will be required to attend the seminar program in your School/Discipline/Center/Institute.

Attendance at research group meetings
Attendance at meetings of your supervisor’s research group is also essential, as this contributes to your understanding of your research topic. Here, you will present your results in discussion or informal seminar format to a small group of research staff/students, including your supervisor/s.

Commencement Date
All students will commence their practical work on the date stated in the relevant Assessment Timetable. You may commence your background reading before this date, but NOT the practical work relating to your project.

Review Sessions
At dates to be arranged throughout the year, Honours students will meet with their specific Honours Co-ordinator for informal discussions concerning the overall progress of their work.

Written assignments
All written assignments submitted during the year must be typed on good quality A4 paper with double-space typing and a 4 cm margin on the left-hand side and 2 cm for the other margins, in 12 point Times New Roman font (approximately 100 words per 8 lines) with a signed school Assignment and Report coversheet attached to it. The student is responsible for payment of all printing expenses relating to the thesis.
## SEMESTER 1 INTAKE - ASSESSMENTS TIMETABLE 2013

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<th>Day/Time</th>
<th>Event</th>
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<td>FEBRUARY</td>
<td>Week commencing 25&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Induction</td>
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<td>MARCH</td>
<td>Week beginning 11&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Feedback for practice essay</td>
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<tr>
<td>APRIL</td>
<td>Week beginning 15&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Research Proposal Seminar (1&lt;sup&gt;st&lt;/sup&gt; Seminar)</td>
</tr>
<tr>
<td>MAY</td>
<td>Monday 13&lt;sup&gt;th&lt;/sup&gt; (10:00 am)</td>
<td>Submission of Literature Review</td>
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<tr>
<td>JUNE</td>
<td>Monday 3&lt;sup&gt;rd&lt;/sup&gt; (10:00 am)</td>
<td>Feedback and marks for Literature Review</td>
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<td>Monday 24&lt;sup&gt;th&lt;/sup&gt; (10:00 am)</td>
<td>Submission of Progress Report</td>
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<tr>
<td>JULY</td>
<td>Monday 8&lt;sup&gt;th&lt;/sup&gt; (10:00 am)</td>
<td>Submission of Abstract (Unrelated Topic)</td>
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<td>Week beginning 15&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Seminar on Unrelated Topic (2&lt;sup&gt;nd&lt;/sup&gt; Seminar)</td>
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<td>OCTOBER</td>
<td>Week beginning 7&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Finish laboratory work</td>
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<tr>
<td>NOVEMBER</td>
<td>Friday 1&lt;sup&gt;st&lt;/sup&gt; (10:00 am)</td>
<td>Submission of completed unbound thesis</td>
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<td>Friday 8&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Research Seminar on Thesis Topic (3&lt;sup&gt;rd&lt;/sup&gt; Seminar)</td>
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<td>Week beginning 11&lt;sup&gt;th&lt;/sup&gt;</td>
<td>Oral Defence of thesis</td>
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<td>Monday 18&lt;sup&gt;th&lt;/sup&gt; (10:00 am)</td>
<td>Return of corrected thesis and payment for thesis binding</td>
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<td>Seminar on Unrelated Topic (2nd Seminar)</td>
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<td>Friday 16th</td>
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<td>Week beginning 19th</td>
<td>Oral Defence of thesis</td>
</tr>
<tr>
<td></td>
<td>Monday 26th (10:00 am)</td>
<td>Return of corrected thesis and payment for thesis binding</td>
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</table>
STAFF INVOLVED IN HONOURS

Honours Coordinators

Your Honours Coordinator, in association with your Discipline-Specific Honours Panel, is responsible for overseeing the whole of your Honours Program during the year. He/She has organised various components of your Honours year and the deadlines for submission of assessed and non-assessed work. They will also organize your final seminar program and the oral defence of your thesis at the end of the year. They are your first point of contact for administrative issues relating to your Honours year such as timetabling of events, reporting of illnesses etc.

Supervisor/s

Your chosen supervisor(s) will be responsible for your project work, including day to day supervision and advice on preparation of all components of your thesis as outlined earlier. They will also provide specific guidance for the literature and research upon which your project is based, as well as providing general guidance on the preparation of your Literature Review, Progress Report, Oral Defence and Final Seminar. However, to protect against potential bias, the University has indicated that supervisors should not be involved in marking your thesis, seminars and oral defence. This does not mean, however, that your supervisor will adopt a 'hands-off' approach. Your supervisor is your mentor. He/she will take an active role in your progress from the very beginning. For example, they will meet with you on a daily basis to plan experiments and review results/data that you have produced and help in their interpretation.

Examiners

You will be assigned two examiners at the end of the third week of commencing your Honours Program by the Honours Co-ordinator, in consultation with the Discipline Honours Panel. All attempts will be made to ensure that at least one examiner will have expertise in your field of study. The examiners will read your Literature Review and Progress Report and will provide feedback on your work. Your examiners will also mark your completed thesis and participate in its oral defence later in the year (asking questions and providing a mark). Please note that you can freely discuss any problems you are encountering in your work with your examiners throughout the course but it is essential that your supervisor is aware of such activity, and any advice provided.

Honours Panels

Individual Discipline Honours Panels take responsibility for ensuring that all students are treated fairly throughout the year. The Panel may play a moderating role where individual marks for a particular piece of written work, including the thesis, differ by a significant margin. The usual difference between marks that will trigger the panel into reviewing a piece of written work will be 10%. When this occurs, a panel member with the appropriate background will read the written assignment. If necessary, the Panel may also solicit advice from non-panel members if the appropriate expertise is unavailable. Students will be advised how the additional marks will be used (e.g., averaging all examiner’s marks or substituting the highest or lowest examiner mark with that produced by the additional examiner(s)).
### BIOCHEMISTRY AND MOLECULAR BIOLOGY, GENETICS AND BIOMEDICAL SCIENCE USEFUL CONTACTS:

<table>
<thead>
<tr>
<th>Role</th>
<th>Contact</th>
<th>Phone No.</th>
<th>Email address</th>
</tr>
</thead>
<tbody>
<tr>
<td>HonoursCo-ordinator (Biochem &amp; Biomed Science &amp; Genetics)</td>
<td>PROF LAWRIE ABRAHAM</td>
<td>6488 2986</td>
<td><a href="mailto:lawrie.abraham@uwa.edu.au">lawrie.abraham@uwa.edu.au</a></td>
</tr>
<tr>
<td>Other Honours Panel Members</td>
<td>A/PROF ROBERT TUCKEY</td>
<td>6488 3040</td>
<td><a href="mailto:robert.tuckey@uwa.edu.au">robert.tuckey@uwa.edu.au</a></td>
</tr>
<tr>
<td></td>
<td>A/PROF ELIZABETH QUAIL</td>
<td>6488 3335</td>
<td><a href="mailto:liz.quail@uwa.edu.au">liz.quail@uwa.edu.au</a></td>
</tr>
<tr>
<td></td>
<td>A/PROF MARTHA LUDWIG</td>
<td>6488 3744</td>
<td><a href="mailto:martha.ludwig@uwa.edu.au">martha.ludwig@uwa.edu.au</a></td>
</tr>
<tr>
<td>Operations Manager</td>
<td>MR GREG ALLEN</td>
<td>6488 4400</td>
<td><a href="mailto:gregallen@uwa.edu.au">gregallen@uwa.edu.au</a></td>
</tr>
<tr>
<td>Administrative Assistants</td>
<td>Reception</td>
<td>6488 4402</td>
<td><a href="mailto:admin-scb@uwa.edu.au">admin-scb@uwa.edu.au</a></td>
</tr>
<tr>
<td>Computing</td>
<td>Reception</td>
<td>6488 4414</td>
<td><a href="mailto:ithelp-scb@uwa.edu.au">ithelp-scb@uwa.edu.au</a></td>
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<tr>
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<tr>
<td>Equipment Faults</td>
<td>MR GREG ALLEN</td>
<td>6488 4400</td>
<td><a href="mailto:gregallen@uwa.edu.au">gregallen@uwa.edu.au</a></td>
</tr>
<tr>
<td>First Aid</td>
<td>MS IWONA KREKORA</td>
<td>6488 3176</td>
<td><a href="mailto:iwona.krekora@uwa.edu.au">iwona.krekora@uwa.edu.au</a></td>
</tr>
<tr>
<td>Radioisotopes</td>
<td>DR ROBERT TUCKEY</td>
<td>6488 3040</td>
<td><a href="mailto:robert.tuckey@uwa.edu.au">robert.tuckey@uwa.edu.au</a></td>
</tr>
<tr>
<td>Safety</td>
<td>MR GREG ALLEN</td>
<td>6488 4400</td>
<td><a href="mailto:gregallen@uwa.edu.au">gregallen@uwa.edu.au</a></td>
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<tr>
<td>Security</td>
<td>UNIPARK</td>
<td>6488 3020</td>
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### CHEMISTRY AND FORENSIC CHEMISTRY, USEFUL CONTACTS:

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<tbody>
<tr>
<td>Honours Co-ordinator (Chemistry)</td>
<td>A/PROF MATTHEW PIGGOTT</td>
<td>6488 3153</td>
<td><a href="mailto:matthew.piggott@uwa.edu.au">matthew.piggott@uwa.edu.au</a></td>
</tr>
<tr>
<td>Honours Co-ordinator (Nanotechnology)</td>
<td>PROF MARTIN SAUNDERS</td>
<td>6488 8092</td>
<td><a href="mailto:martinsaunders@uwa.edu.au">martinsaunders@uwa.edu.au</a></td>
</tr>
<tr>
<td>Other Honours Panel Members</td>
<td>PROF GEORGE KOUTSANTONIS</td>
<td>6488 3177</td>
<td><a href="mailto:george.koutsantonis@uwa.edu.au">george.koutsantonis@uwa.edu.au</a></td>
</tr>
<tr>
<td></td>
<td>W/PROF COLIN RASTON</td>
<td>6488 3045</td>
<td><a href="mailto:colin.raston@uwa.edu.au">colin.raston@uwa.edu.au</a></td>
</tr>
<tr>
<td></td>
<td>PROF ALLAN MCKINLEY</td>
<td>6488 3165</td>
<td><a href="mailto:allan.mckinley@uwa.edu.au">allan.mckinley@uwa.edu.au</a></td>
</tr>
<tr>
<td>Operations Manager</td>
<td>MR GREG ALLEN</td>
<td>6488 4400</td>
<td><a href="mailto:gregallen@uwa.edu.au">gregallen@uwa.edu.au</a></td>
</tr>
<tr>
<td>Administrative Assistant</td>
<td>Reception</td>
<td>6488 4402</td>
<td><a href="mailto:admin-scb@uwa.edu.au">admin-scb@uwa.edu.au</a></td>
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<td>6488 4414</td>
<td><a href="mailto:ithelp-scb@uwa.edu.au">ithelp-scb@uwa.edu.au</a></td>
</tr>
<tr>
<td>Crystallography Facility</td>
<td>DR BRIAN SKELTON</td>
<td>6488 7107</td>
<td><a href="mailto:brianskelton@uwa.edu.au">brianskelton@uwa.edu.au</a></td>
</tr>
<tr>
<td>Emergency</td>
<td>DIAL 2222</td>
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<td>First Aid</td>
<td>MS IWONA KREKORA</td>
<td>6488 3176</td>
<td><a href="mailto:iwona.krekora@uwa.edu.au">iwona.krekora@uwa.edu.au</a></td>
</tr>
<tr>
<td>GC/MS Facility</td>
<td>DR TONY REEDER</td>
<td>6488 1744</td>
<td><a href="mailto:anthony.reeder@uwa.edu.au">anthony.reeder@uwa.edu.au</a></td>
</tr>
<tr>
<td>NMR Facility</td>
<td>DR LINDSAY BYRNE</td>
<td>6488 1887</td>
<td><a href="mailto:lindsay.byrne@uwa.edu.au">lindsay.byrne@uwa.edu.au</a></td>
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<td><a href="mailto:gregallen@uwa.edu.au">gregallen@uwa.edu.au</a></td>
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<td>6488 3020</td>
<td><a href="mailto:unipark@admin.uwa.edu">unipark@admin.uwa.edu</a></td>
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</table>
PREPARING YOUR HONOURS THESIS

The following points relate to the preparation of your thesis. Please note that the requirements must be strictly adhered to, as failure to do so will incur a penalty in the form of a deduction of marks from the total marks allocated for presentation.

**During the preparation** of the thesis, a supervisor will **read and critique** your Introduction, Materials and Methods and Results for grammar, spelling and content. The writing of the Discussion must be your own work, but it is expected that you will have discussed in detail with your supervisor(s) your results, their interpretation and presentation.

The thesis should be typed on good quality A4 paper with double-spaced typing and a 4 cm margin on the left-hand side, 2 cm on the other margins, in 12 point Times New Roman font (approximately 100 words per 8 lines). It **MUST NOT** exceed **90 pages** in length, **including** tables, figures, appendices and references, and should be presented in a format similar to that used in scientific publications. Appendices should be restricted in number and you should seek guidance from your supervisor about their inclusion. A concise presentation earns more marks than a lengthy, rambling one. The student is responsible for payment of all printing expenses relating to the thesis.

In preparing your thesis on a word-processor, think about how you will manage the layout, for example, one file for the whole thesis or one file per section, and remember to back up your computer files on a regular basis.

Before submission, please ensure that all pages of the thesis are correctly numbered and in sequence, and that they have been carefully proof-read for spelling, punctuation and other typographical errors. Remember that software such as 'Word' has a spell checker – use it to your benefit.

The structure of the thesis will vary from discipline to discipline, and even within sub-disciplines. The structure you use should be based on the convention of your research area, and should be constructed in consultation with your supervisor. Past Honours theses will be helpful in this respect.

Regardless of discipline, all Honours theses should contain the following front matter:

- **Title page:** The title plus author's name.
- **Signed statement:** This should state that this work was solely performed by the student, unless otherwise indicated, and is submitted as part of the requirement for a BSc Honours degree.
- **Summary:** This should start with a brief introductory paragraph outlining the scientific objectives which were addressed (do not use verbatim large sections of text already forming part of your introduction), and then be followed by a summary of the actual results obtained (be specific here). You should finish by providing a concluding paragraph. The Summary should be devoid of scientific jargon and abbreviation; it should be concise and understandable in its own right. The use of a limited number of figures is encouraged where they convey much meaning (e.g. chemical structures).
- **Acknowledgments:** All major assistance with your work should be acknowledged. This section of the thesis represents more than saying “thank you” to your friends. It provides an opportunity for “intellectual honesty”, a statement of others’ contributions to your work. For example, if your cell cultures were grown for you, this must be acknowledged. Similarly, the technical assistance by others on a regular basis should be acknowledged here.
Note that acknowledging others will not detract from the recognition of your role in producing the body of work presented. Failure to acknowledge the contributions of others is a form of plagiarism, and constitutes academic misconduct.

Any quotation from other authors should be acknowledged in the usual way at the appropriate place in the thesis. Figures or diagrams that are not derived from your own work should be acknowledged immediately below the figure (e.g., Figure taken from ……; Figure modified from …….) If you use your own data twice in a thesis, e.g. two figures derived from the same data, note this the second time the data is presented.

- **Table of Contents**: This should be logically organised and the pagination accurate.

- **List of abbreviations**: Abbreviations, particularly those used frequently, may be used in the text but must be spelt out fully when first used, followed in brackets by the legitimate abbreviation. If abbreviations are to be used, a list of abbreviations together with their meaning must appear in the front of the thesis. A list of abbreviations common to your discipline may be used without being described or appearing in your own abbreviation list. Please consult with your Honours co-ordinator to determine the discipline-specific requirements in this regard. Try to restrict your use of abbreviations to situations where their use improves clarity, rather than just making writing easier for you. Abbreviations can destroy clarity for those not familiar with the field.

- **Introduction**: See the earlier instructions on Literature Review (page 4).

   At this point the conventions for the different disciplines and sub-disciplines diverge, and again, you are advised to seek advice from your supervisor about how to structure your thesis. A typical layout might include the following sections:

- **Materials and Methods**: This section should provide enough information to allow others to repeat your experiments if they so wished. Where the methods that are used have been adequately described by others, it is not necessary to describe them in full, unless they have been modified by you. Without modification, it may be appropriate to provide a brief sentence together with an appropriate reference. Any new methods or modification of existing methods that you have introduced and have resulted in the generation of the data during the year should be included in your Results section since they were part of your own experimental work. If you are in any doubt, consult your supervisor.

- **Results**: These are not necessarily presented in the order in which you carried out the experiments, but logically in order to support your argument. All tables and figures should be numbered and include a suitable heading or legend which clearly explains the nature of the experiment and the results. These captions should be self-explanatory, thus eliminating the necessity for the reader to refer to the text for the salient details. Each Results chapter should end with a brief summary of what the chapter was about, and what the main findings were. You could use dot points to summarise your findings. Alternatively, you may have a single Results chapter. Please leave the discussion of the results entirely to the final discussion section. With this section your supervisor will play an important role in that they will be able to proof read what you have written and comment on its structure and flow.

- **Discussion**: This section integrates the data from all of your Results sections into a single component of your thesis. It is here that you analyse your research rather than simply describing what results were obtained. In many ways, this is the most important section of your thesis and this is reflected in the marks awarded. The Discussion should show how you have interpreted
your data and related them and their significance to published data. You may also provide a
review of the present state of knowledge and your contribution to it. It should also include the
probable direction of future work in the field. Use the Discussion section to demonstrate that
you can think. Allow some speculation, but restrict it to the facts you have presented and the
way they tie in with loose ends in the literature. Make sure you differentiate between hard data,
indicative evidence and hypothesis.

- **References**: The formatting of citations and references is discipline-specific and even differ
within disciplines, therefore, you must take advice from your supervisor and Honours co-
ordinator. Use EndNote or similar software to collate your references from the very beginning of
your work, as this will allow you to easily format them before submitting your thesis for
marking. All references should be listed at the conclusion of the thesis. Use legitimate
abbreviations for journals – do not include full titles. **Do not list references that you have not
read** - note that examiners will check your references and determine whether they correlate with
citations in the text of your thesis. Ensure that all references cited in the text appear in the
References section of your thesis. Note that during the oral defence, the examiners are entitled to
question you on material cited in your reference section. It is critical that mistakes in the
bibliographic details (authors names, page number etc.) are avoided.

**How many copies of your thesis should you submit?**

In addition to retaining a copy of your thesis for yourself, you should submit a minimum of **four**
copies for examination. If you have more than one supervisor, extra copies of your thesis are
required. The original thesis, together with the extra copies required, in temporary binding (comb
binder), must be submitted to the Honours co-ordinator **by the date stated in the relevant
Assessment Timetable Failure to submit on time will incur a penalty of 5% of the written thesis
mark per day late. Your thesis submission must be accompanied by a signed declaration that the
thesis is your own work, unless otherwise stated (Appendix 8). If such a statement is not provided,
your thesis will not be marked.**

Your thesis will be critically examined by the two examiners. They and the other panel members
will conduct the questioning in the oral defence, approximately two weeks after submission of the
thesis. Examiners’ guidelines for marking your thesis are provided for your information in
Appendix 5.

Following your oral defence, you may be requested to correct various errors found in the thesis by
the examiners. The corrected thesis **must** be completed within the week following the oral defence
and handed to your supervisor for certification that the required changes have been made.

If the Honours co-ordinator does not receive notification that the thesis has been corrected by the
date stated in the relevant Assessment Timetable, the results will not be forwarded to Faculty. This
would, therefore, delay the awarding of your Degree.

The School is responsible for payment of the binding of three copies of the thesis for you, your
coordinating supervisor and the School (Discipline). If other copies are to be bound for personal use
or for extra supervisor’s copies, you and the supervisor/s are responsible for paying for their
binding. Payment for binding of your own extra personal copies must be made **in advance** via
UniPrint and the receipt provided at the time of submission of the corrected thesis at the reception
desk. This year, it is expected that binding will cost about $35 per copy.

The required number of hard copies of the corrected thesis to be bound must be submitted to the
School reception desk **the date stated in the relevant Assessment Timetable, together with a
clearly labelled copy of the complete thesis on a CD (a PDF file is preferred). Please provide the**
CD within a disk cover, and ensure that you mark your name, student number and discipline directly onto both the disk and the disk cover.

Plagiarism: Plagiarism is the act of taking and using another person’s work (of any description including ideas, experimental results, written work, etc.) without appropriate acknowledgement. The act may be intentional or unintentional but, either way, the School and the University regards it as a very serious matter, and contrary to standards expected in a scholarly activity. In your Honours year, you have to be particularly careful, since you will be writing a literature review of your area of study. Thus, you will be reading many papers and reviews, and it may appear expedient to use actual sentences or even paragraphs from the original source. Although you may think that citing the relevant references justifies this, the process of incorporating such material verbatim is plagiarism and, thus, unacceptable. Copying material from another BSc Hons or other theses also constitutes plagiarism. In the unlikely event that you should wish to include an author’s exact words (it is generally not the best option), you must use quotation marks around the material, as well as citing the reference. Since using this approach may give an examiner the impression that you do not understand the material, you should use it only when the author’s exact words are needed (e.g., quotation from an important statement or speech). In all other cases, you should provide your interpretation of the author’s work in your own words. You may want to take advantage of the University’s access to Turnitin to detect overt plagiarism. Your Honours co-ordinator will provide details of this if requested.

If plagiarism is detected, it will be regarded as cheating and marked severely or, alternatively, students may be excluded from the Honours program. When you hand in your summative assessments, you are asked to complete an Assignment and Report coversheet, and without them they will not be marked. Once submitted they will be marked and subjected to on-line plagiarism detection services. If plagiarism is detected, penalties will be administered according to University policy. If you are in doubt about what constitutes plagiarism after reading the Faculty of Life & Physical Sciences guidelines, you must discuss the issue with your supervisor or Honours Co-ordinator. Your reputation as a scientist is a valuable asset and you should take care to protect it, by maintaining high standards of intellectual honesty at all times.

HONOURS SURVEY

At the conclusion of the oral defence of your thesis, you will be asked to complete an Honours Survey form (Appendix 6). The (anonymous) data are collated and then analysed by the Honours Co-ordination Committee. The School values this feedback and will endeavour to resolve issues you consider to be sufficiently important to bring to our attention.
STUDENT RESPONSIBILITIES

Absences
Supervisors are responsible for guiding you in your laboratory work. Therefore, it is both courteous and a requirement that you notify the supervisor (or other staff if the supervisor is absent) if you are going to be absent for any reason. Research is costly and supervision is demanding. Please respect the resources and effort that have gone into providing you with a research project by being a good corporate citizen in the laboratory and in your chosen discipline. If you have a problem with your work, it should be discussed immediately with your supervisor or the particular staff members responsible for that section of the course. Your examiners, who will be familiar with your work, may also have useful suggestions.

- **Illness:** If you are ill during the year you should obtain a medical certificate **AT THE TIME OF THE ILLNESS** and submit it to the Course co-ordinator. Consideration for ill-health cannot be given unless a certificate from a registered medical practitioner is submitted at the time, i.e., presenting one at the time your thesis is being marked is inappropriate.

- **Part-time work:** While it is appreciated that many students will take on such work for financial reasons, you are encouraged to keep these commitments to the absolute minimum to ensure that you can give your Honours work your full attention. As a guide, more than 8 hours external work per week is considered excessive and may impact on your progress. You must discuss any work commitments with your supervisor so that he/she is aware of potential absences and can accommodate them. If there is a need for more than 8 hours per week, you should discuss it with the Honours co-ordinator. Normally, compensation or special consideration cannot be given to a student who takes on too much part-time work.

Laboratory notebooks
Students are required to document their research in a laboratory notebook, which must be shown to the supervisor/s on request. **Failure to keep a satisfactory laboratory notebook or to make it available for inspection by the supervisor may result in the student not being permitted to submit their thesis.** Students should seek guidance from their supervisors on how to set out entries in their books. The safety and security of laboratory notebooks is the responsibility of the student. Laboratory notebooks remain the property of the supervisor / university for five years after the completion of the Honours year.

Student / Supervisor Conflict
If you are in conflict with your supervisor, you must discuss the matter immediately with the Honours co-ordinator. If the matter is not resolved to your satisfaction, then you should discuss it with the Chair of Discipline and, failing that, with the Head of School. We try to ensure that conflicts do not arise, but if they do, there is more than one avenue open to you to seek help. **Consideration cannot be given for problems after the thesis has been submitted, unless they have previously been documented.**
Charter of Student Rights and Grievance Resolution Policy

Detailed information on these issues are provided on the Web through the Students Home Page (http://www.student.uwa.edu.au/life/charter).

General procedures

Details regarding ordering materials, keys, photocopying, animals etc. will be discussed in the induction week. In addition, names and contact details of relevant people in your Discipline may be found on the School website.

Failure to meet submission dates

Penalties may be incurred for failure to submit your thesis or other work by the due date. In the particular case of late submission of the thesis, a penalty of 5% of the thesis mark per day late, extending for up to 10 days beyond the due date is applied, after which time the student is required to contact the co-ordinator to find a resolution to the problem. Further penalties may be applied.

In the event of illness or other factors adversely affecting your progress, you should report to the Honours co-ordinator as soon as possible. It is highly desirable to seek assistance with problems or personal difficulties well in advance of any due submission date.

Extensions to submission deadlines may be granted but only under special circumstances, and only after consultation with the Honours co-ordinator.

Special Consideration

If your preparation for, or performance in, an assessment event within the Honours program is seriously impaired by illness or other circumstances beyond your control, you may apply to the Faculty of Life and Physical Sciences for special consideration to be taken into account. However, you should first contact your Honours co-ordinator, then complete the appropriate form and forward it to the Science Student Office along with supporting documentation (e.g., appropriate medical or other reports) and a written statement explaining the circumstances. An application for special consideration should be received by the Science Student Office no later than three working days following the submission date of the assessment event. The Faculty Board of Examiners may agree to consider late applications if there are additional exceptional circumstances preventing application within this time limit, but applications will not be accepted after final results have been recorded.

The following website may be consulted for the appropriate procedure:


This approved procedure for special consideration appears in the University General Rules for Academic Courses in the Student Procedures, Rules and Policies section of UWA’s website.
SUPERVISORS’ RESPONSIBILITIES

As indicated elsewhere in this booklet, your supervisor is your first ‘port of call’ for advice, direction and support. Each supervisor is a formal academic or adjunct member of the School who is trained in supervising students at Honours level. They are the ones who have devised the research project (hypothesis / objective) and obtained the funds (usually from external sources) that will support your project. Each supervisor, usually with the assistance of senior postgraduates and postdoctoral fellows, will work with you to see that your Honours year runs smoothly. Each supervisor will have a particular style of supervision and this may vary considerably. However, each will guide you in the construction of your literature review and other written components of your thesis, the design of experiments, the development of your technical skills and the interpretation of your results.

HINTS AND GUIDELINES FOR HONOURS WORK

The following section includes advice that may be useful in your Honours year.

Meeting Deadlines

Meeting deadlines is essential in a situation when your activities affect other people and where their activities affect you. Deadlines are not drawn out of thin air…. the date for the thesis submission, for example, is determined by the deadlines decreed by the University for the submission of results and the Scholarships Office. It is also influenced by the other commitments of academic staff at the time.

As an Honours student, you are far more dependent on your ability to organize yourself than you were previously. Your success is, therefore, dependent on your self-discipline.

The key to meeting deadlines is to recognise the essential truth of "Murphy’s Laws" and their certain application to your Honours work.

- **1st Law:** A task will take much longer than you expect.
- **2nd Law:** Any essential piece of equipment is guaranteed to break down just before a deadline.
- **3rd Law:** Anything that can go wrong will, just before a deadline (influenza, plague, the car exploding, eviction, etc.).
- **4th Law:** The people you rely on may not meet their deadlines.

The only way to meet a deadline in these circumstances is to plan ahead; have a plan for the year and prepare weekly research plans. Allow yourself very generous safety margins to accommodate all of Murphy’s predictions. Do not leave your thesis write-up until the last moment. Start it at the beginning of your Honours work - and keep adding to it; ideas as well as data.

Keeping a diary/calendar is an important part of being organised.
Undertaking a literature survey

A thesis literature survey / introduction serves to:

- Ensure that you are familiar with existing work in your field. Reading the literature helps you understand the significance of the findings of other workers and any limitations that may apply to their work. Careful reading of their work may indicate that their results do not fully support conclusions being drawn (i.e., critically read previous research). Be careful not to let your own ideas be confined by the narrow approach of some workers.

- Make you aware of the techniques that can be used to address your particular problem.

- Increase your awareness of the relevance of your project, and may indicate possible applications of your work.

Before starting the literature review, attempt to:

**Define** the objective you are investigating.

**Identify** the key areas of interest that you need to include, and the keywords that may help you in your search.

**Ensure** that the *proposed structure* for your review is *relevant* in consultation with your supervisor.

**Decide** how you will record the references you find. The Endnote program, available (without cost to you) for both Macintosh and PC computers, should be used to archive your references as this will facilitate the compilation of your bibliography when you prepare your thesis later in the year. Remember that this database should be backed up regularly.

Remember to record all bibliographical details that you need, both for your literature review and for your thesis. The journal may be unavailable for a variety of reasons, by the time you come to write your thesis. You should download your references from the appropriate bibliographic data bases and transfer them to your Endnote library as you go along. After some initial work in the library (perhaps 15–20 papers), make a preliminary plan of your review. Discuss this in detail with your supervisor to ensure you are on the right track.

The review should fall naturally into three major parts:

- The general setting.
- The narrow field of your interest.
- The precise question you are attempting to answer (namely, the project proposal) together with details of the experimental approach to be adopted.
With regard to references, you must pay attention to:

**What the references say:** It is dishonest to misquote a reference to support your theory or to quote it out of context.

**Reference identification details:** The page and volume numbers, spelling of authors’ names, and the order of names, the initials, the title of the paper, including spelling, and the punctuation must all be correct. Always check the references from the original paper otherwise you may perpetuate errors. Attention to detail is an essential characteristic of a good scientist.

**Presenting a seminar**

- Remember that you only have 20 minutes (excluding questions) for the presentation of the 2nd and 3rd seminars.

- The most successful presentations are often those which build a story, e.g., an account of a problem or area of interest, and the way in which understanding of this area was built up. Remember that the seminar should have a clear beginning, a middle and a conclusion. Use PowerPoint - your presentation is certain to rely heavily on graphics, so make sure that your material is visible from the back of the room, is uncluttered (one idea per PowerPoint slide is a good rule), and easily read. If using overheads (for informal seminars only) keep the content well within the boundaries of the sheet so that you do not need to move the sheet while it is on the projector. You are expected to use PowerPoint for your assessed seminars.

- Do not assume that your audience will be as knowledgeable as you with regard to the topic being presented. On this basis, provide the appropriate background information to enable them to follow your seminar with interest.

- Speak your seminar - don’t read it, as this will impact negatively on your mark. A good strategy is to write the talk out in full, then transfer the main ideas to cards and speak from the cards if necessary. It does not matter if you have to refer to notes, although lengthy pauses disrupt the flow of your presentation. Do not worry if your presentation does not correspond exactly to what you prepared. Think about what you are saying; be enthusiastic and logical, and your audience will find your talk interesting.

- Make sure your talk fits the time available. You will score well for judging the time. If you mark quarter points in your talk (e.g., one-quarter of the way through) and watch the clock, you can adjust your pace as you go. Of course, it is critical that you practice your talk beforehand to ensure that the timing is right.

- Think carefully about the sort of questions your listeners may ask and be prepared to answer these. Try and anticipate questions and prepare appropriate answers. This means sitting down with a printout of your talk and imagining you are a member of the audience.

- Do not rush into answering a question. Take your time. Do not be afraid to say you do not know the answer. If you do not understand the question, ask for it to be rephrased.

- Remember that practice makes perfect so the more preparation and practice you get, the better. Families, friends, and even tape recorders make useful audiences. You should also be taking every opportunity to speak at your research group's meetings.
• Your audience will generally be sympathetic; everyone knows the stress and anxiety associated with giving a seminar. To help quell these feelings, imagine you are telling a group of friends about something that interests you a great deal.

• Listen carefully to the feedback on your presentation from your supervisor after the seminar is over. Seminar presentation is an important form of communication in science. Anyone can learn to give a good seminar with a bit of practice and good advice.
APPLYING FOR POSTGRADUATE SCHOLARSHIPS

All Honours students are strongly recommended to apply for PhD scholarships, even if they are certain that they do not wish to continue to postgraduate studies. It is not uncommon for students to change their minds after the results are published. By then, however, it is too late to apply. If you are offered a scholarship, you are under no obligation to accept it.

For full information about the availability of scholarships and the conditions for application, you should consult the Scholarships Office (phone 08 6488 2807). Information and application forms are available on the Postgraduate Scholarships web page (http://www.scholarships.uwa.edu.au/).

There are a number of different types of postgraduate awards:

Australian Postgraduate Awards (APA)

These can be held at this or other Australian Universities, but you must apply to each university individually. Only students with an H1 grade can be awarded APA's.

University Postgraduate Awards (UPA)

These scholarships are for candidates wishing to continue studies at this campus. Only students with a H1 or H2A degree are eligible.

Scholarships available for international students

Several different scholarships are available, including UWA IPRS's. Again, students should consult the Postgraduate Scholarships web page (http://www.scholarships.uwa.edu.au/) for information and application forms.

Scholarships and grants provided by outside funding bodies

Some peer-reviewed granting bodies, such as the National Health & Medical Research Council, and The National Heart Foundation offer postgraduate scholarships. These can be held at this or other Australian universities, but you must apply to each university individually. The conditions and closing dates of individual scholarships differ greatly and you should consult the appropriate websites.

Please note that even obtaining a First Class Honours degree will not guarantee that you will be offered a Postgraduate Award, since the availability of scholarships will reflect the demand and availability, and both fluctuate from year to year. Similarly, you should be aware that scholarship committees rank applicants on the basis of their full undergraduate academic record and that the weighted average plays an important role in determining rankings as well as the research potential (as judged by the School’s Scholarships Committee).
GUIDELINES ON RESEARCH ETHICS AND RESEARCH CONDUCT

The University of Western Australia’s Guidelines on Research Ethics and Research Conduct can be found at http://www.research.uwa.edu.au/staff/research-policy/guidelines, and should be read by all students.

If you are working with animals, with genetically manipulated microorganisms, or with humans where ethical considerations are important, you should consult the appropriate guidelines, which can also be found on the above webpage.
This assessment is provided to give students a guide to their performance. Although a mark may be given by an assessor, it will not be used in the overall assessment process for Honours.

**CLARITY OF THE ORAL PRESENTATION:** (Did the student speak lucidly and not read from notes? Was an effort made to communicate with all the audience?)

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**CLARITY OF THE VISUAL PRESENTATION:** (Was the content well organised, with well formed Introduction and Summary/Conclusions? Were the slides well prepared, logically presented and easy to follow? Did they enhance the presentation? Was there a suitable balance of text vs. figures?)

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**QUALITY OF THE SCIENTIFIC CONTENT OF THE TALK:** (Was the topic adequately covered in breadth? In depth? Where data were presented, were they scientifically sound, properly analysed, well discussed and interpreted?)

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**DEMONSTRATION OF UNDERSTANDING AND MASTERY OF THE TOPIC:** (Did the student answer the questions satisfactorily? Did they provide fluent responses? Did they convince the audience that they have worthwhile ideas independent of their supervisor and truly understand the area studied?)

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EXAMINER'S NAME: .................................................. STUDENT NAME: ..................................................

DATE: ......................

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<th>Content / 20</th>
<th>Questions / 10</th>
<th>TOTAL / 40</th>
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NOTE: Honours Grades: H1 ≥80; H 2A 70-79; H 2B 60-69; H 3 50-59
**School of Chemistry & Biochemistry**

**UNRELATED SEMINAR - ASSESSMENT SHEET**

This SEMINAR contributes 10% towards the overall assessment for Honours. The associated SUMMARY counts for an additional 2.5% of each student’s assessment.

Please complete a separate sheet for each student whose Seminar you assess; sign, date and return the completed sheet to the Honours Coordinator.

**CLARITY OF THE ORAL PRESENTATION:** (Did the student speak lucidly and not read from notes? Was an effort made to communicate with all the audience?)

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**CLARITY OF THE VISUAL PRESENTATION:** (Was the content well organised, with well formed Introduction and Summary/Conclusions? Were the slides well prepared, logically presented and easy to follow? Did they enhance the presentation? Was there a suitable balance of text vs. figures?)

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**QUALITY OF THE SCIENTIFIC CONTENT OF THE TALK:** (Was the topic adequately covered in breadth? In depth? Where data were presented, were they scientifically sound, properly analysed, well discussed and interpreted?)

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**DEMONSTRATION OF UNDERSTANDING AND MASTERY OF THE TOPIC:** (Did the student answer the questions satisfactorily? Did they provide fluent responses? Did they convince the audience that they have worthwhile ideas independent of their supervisor and truly understand the area studied?)

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Student name: ___________________   Marker’s name & signature: ___________________

Date: __________

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**MARKS for SUMMARY:**

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<th>Clarity &amp; Logical Flow / 10</th>
<th>Succinctness / 10</th>
<th>Accuracy / 10</th>
<th>Grammar / 10</th>
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**MARKS for SEMINAR:**

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<th>Content / 20</th>
<th>Questions / 10</th>
<th>TOTAL / 40</th>
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</table>

NOTE: Honours Grades: H1 80; H 2A 70-79; H 2B 60-69; H 3 50-59
School of Chemistry & Biochemistry

THESIS TOPIC SEMINAR - ASSESSMENT SHEET

Student Name: .................................................................

This SEMINAR contributes 10% towards the overall assessment process for Honours. Please complete a separate sheet for each student whose Seminar/Summary you assess, and return the completed sheet and Summary to the Honours Coordinator.

CLARITY OF THE ORAL PRESENTATION: (Did the student speak lucidly and not read from notes? Was an effort made to communicate with all the audience?)

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CLARITY OF THE VISUAL PRESENTATION: (Was the content well organised, with well formed Introduction and Summary/Conclusions? Were the slides well prepared, logically presented and easy to follow? Did they enhance the presentation? Was there a suitable balance of text vs. figures?)

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QUALITY OF THE SCIENTIFIC CONTENT OF THE TALK: (Was the topic adequately covered in breadth? In depth? Where data were presented, were they scientifically sound, properly analysed, well discussed and interpreted?)

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DEMONSTRATION OF UNDERSTANDING AND MASTERY OF THE TOPIC: (Did the student answer the questions satisfactorily? Did they provide fluent responses? Did they convince the audience that they have worthwhile ideas independent of their supervisor and truly understand the area studied?)

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EXAMINER'S NAME: ...................................................... STUDENT NAME: ......................................................

Date: .................................................................

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NOTE: Honours Grades : H1 ≥80; H 2A 70-79; H 2B 60-69; H 3 50-59
GUIDELINES FOR CONDUCT AND ASSESSMENT OF THE ORAL DEFENCE

The student will be questioned primarily by the two thesis examiners, with the possibility of some questions from the other members of the Honours panel. The supervisor(s) will be present, but will observe only. The oral will be up to 40 minutes duration. After the student has left, there will be a short discussion where the chair will invite comments on the student’s performance and answers provided. Following this, all except the supervisors, will fill in the marking sheet.

1. Examiners should come prepared to ask **EIGHT** or more critical questions. Have these clearly written down, and the relevant pages(s) in the thesis noted, to save time during the oral defence.

2. Questions should include a range, from technical, relating to assays used, background information from the introduction, to issues raised and statements made in the discussion.

3. Questions should not address typographical or minor errors in tables etc., unless this is essential prior to further in depth questions, as it is a time-waster during the oral defence. Detailed lists of errors, which you consider must be corrected, should be provided to the student at the end of the oral exam or identified on the thesis hard-copy.

4. The Honours Co-ordinator will monitor the time and number of questions asked.

5. In assessing a student’s performance in the oral defence, criteria to be considered might include those below, as well as those shown in the ‘oral defence marking sheet’ on the following page:

   - **Fluency**
     Did the student speak fluently and lucidly; were answers either too brief, or concise and to the point, or too long and rambling; was it difficult to ‘extract’ answers from the student.

   - **Demonstration of understanding and mastery of the topic**
     What proportion of questions were answered correctly; was the student able to support answers by reference to the scientific literature; were deficiencies in the thesis understood; was the student able to discuss alternative interpretations of the data; did the student think fast on their feet; did the student understand why particular assays were used and how these worked; did she/he know what reagents were used; was there a depth of understanding or was it superficial.
### School of Chemistry & Biochemistry

#### HONOURS ORAL DEFENCE ASSESSMENT SHEET

**Instructions:** Place a tick in the most appropriate box for each criterion and use as a guide to allocate your final % mark.

<table>
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<tr>
<th>Criterion</th>
<th>Range ➔</th>
<th>F</th>
<th>H 3</th>
<th>H 2</th>
<th>H 2A</th>
<th>H 1</th>
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<td>Has the student demonstrated understanding and mastery of the research undertaken?</td>
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<td>Failed to understand significant portions of the work.</td>
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<td>Good to Very Good</td>
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<td>Able to engage in interpretation and analysis of data, discuss deficiencies in results obtained, &amp; expand on discussion statements</td>
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<td>Does the student demonstrate effective communication skills?</td>
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<td>All answers stumbling, unclear or garbled</td>
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<td>All answers too brief, or rambling, off-the-point</td>
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<td>Clear, fluent and confident answers to all questions</td>
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<td>Failed to understand most methods used</td>
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<td>All questions answered concisely &amp; to-the-point, answers of appropriate length</td>
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<td>Able to explain theoretical basis of protocols, reagents &amp; equipment used, strengths &amp; limitations of methods used, &amp; alternative methods</td>
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<td>Does the student demonstrate a thorough understanding of the scientific literature relevant to their research?</td>
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<td>Able to recall &amp; explain models underpinning the research, cite relevant publications, identify deficiencies in the published literature</td>
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**STUDENT:** ...........................................  **SIGNATURE:** ....................................  **Date:** / /  

**EXAMINER (NAME):** ........................................  **MARK:**  

Page | 31
School of Chemistry & Biochemistry
HONOURS – SUPERVISOR’S ASSESSMENT SHEET

Supervisor’s Name: __________________________ Discipline: __________________________

Student’s Name: __________________________ Student Number: __________________________

Please complete this form according to the Honours gradings (1st class ≥ 80%; 2A 70-79%; 2B 60-69%; 3 50-59%), then return to the Honours Coordinator, after hearing your student’s oral defence.

Where more than one supervisor is involved, a combined assessment should be provided, although separate assessment may be submitted if preferred.

1. **Knowledge of the literature**
   Did the student develop a thorough knowledge of the existing literature in the area?
   What of their ability to integrate possibly disparate findings and perform a critical analysis leading to alternative interpretations? Did they read widely?

2. **Ability to define scientific objectives**
   Can the student generate critical questions from a collection of data, leading on to feasible experiments? Do they understand existing knowledge but are unable to see the way forward? Did they understand the implications of their results before you discussed them?

3. **Ability to design experiments**
   Does the student understand whether the proposed experiment will answer the scientific question? Is there an understanding of circumstantial or definitive evidence?
   Does the student understand the place of controls, bias and variance?

4. **Technical knowledge and skills**
   Did they develop knowledge of technical procedures and their limitations? Of relevant experimental technical skills? Were they capable in the lab? Did they execute experiments in a competent fashion, or did experiments have to be repeated because of technical flaws?

5. **Data analysis and interpretation**
   Did they use appropriate models, analyses and, where appropriate, relevant statistical tests? Did they have a tendency to over/under interpret data? Did they develop sound inferential skills and the ability to place results in context with the literature?

6. **Scientific writing skills**
   Was much assistance required in their written work?
   Can they write with fluency, with clarity and logic of expression, and with accuracy of scientific statements?

7. **Oral communication skills**
   Did they communicate their day-to-day results clearly to you? Did they communicate clearly to others in the group, in seminars or group meetings?

8. **Motivation towards scientific research**
   Are they a self-starter or did they have to be pushed/programmed?
   Did they gain the ability to plan their work independently, or was your help always needed?
   Were they persistent in tackling problems?

9. **Independence and originality**
   Did they introduce new ideas, techniques or analyses from the literature into the laboratory or only use those already established? Could the student problem-solve or not?
   Were they able to suggest the next step in the project or not?

10. **Potential for further research**
    Does the student have the ability, capacity and temperament for further research?
    Using the cut-offs for Honours grades as a guide, provide a mark (out of 10) to reflect this.

**TOTAL RATING OUT OF 100**
APPENDIX 5

GUIDELINES FOR THE ASSESSMENT OF THE LITERATURE REVIEW / THESIS

1. **Presentation (Literature Review and Thesis)**
   Was the review / thesis meticulously or carelessly written; was there a logical presentation of the field of study / study rationale; was the significance of the need for further work in the area clearly established; was the information presented in a clear and precise manner; did the student realise the distinction between results and interpretation?

2. **Knowledge of the literature (Literature Review and Thesis)**
   Did the student demonstrate a sound knowledge of the existing data base and conventional wisdom in the area; was there evidence of the student’s ability to integrate findings from the literature; was there any evidence of critical analysis by the student leading to alternative interpretations of data in the literature?

3. **Scientific integrity of the study (Thesis)**
   Were techniques adequately described and used appropriately in the thesis; were adequate controls incorporated into the experimental design; could the techniques applied suitably answer the questions posed; were the data correctly analysed; were relevant experimental conditions/concentrations selected?

4. **Originality (Thesis)**
   Did the student introduce/develop new techniques or analyses, or use those already established in the laboratory; were significant new results generated or were they entirely predictable from the literature?

5. **Insight (Literature Review and Thesis)**
   Did the student demonstrate evidence of understanding of the significance of findings; ability to speculate beyond present thinking; ability to discern between circumstantial and definitive experiments/findings and questions?

6. **Aims and Methodology of the project (Literature Review and Thesis)**
   Did the student include a list of specific aims associated with the project as well as a reasonable account of the methods to be used in tackling the stated aims and the likely outcomes?
School of Chemistry & Biochemistry

HONOURS LITERATURE REVIEW ASSESSMENT SHEET

Student Name: …………………………………………..

Brief Comments (not for transmission to students):

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PRESENTATION / 20  CONTENT / 80  TOTAL / 100

MARKS:

NOTE: Honours Gradings: H1 ≥80; H2A 70-79; H2B 60-69; H3 50-59

Marker’s Name: …………………………………………..  Date: ………………………………………..

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HONOURS LITERATURE REVIEW ASSESSMENT SHEET

Student Name: …………………………………………..

Brief Comments (for transmission to students):

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Marker’s Name: …………………………………………..  Date: ………………………………………..

Marker’s Signature: ………………………………………..
School of Chemistry & Biochemistry
HONOURS THESIS ASSESSMENT

To be handed to the Honours Coordinator prior to the Oral Examination

DISCIPLINE: _________________________________

THESIS TITLE: _____________________________________________________________

STUDENT ID:    __________________________________

1. Presentation
Meticulous or careless; logical presentation of study rationale; significance of the study established; clarity of expression; does the student realise the distinction between results and interpretation.

COMMENTS:
__________________________________________________________________
__________________________________________________________________
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E MARK/10

2. Content
Knowledge of the existing data base and conventional wisdom in the area. Did the student introduce/develop new techniques or analyses, or use those already established in the laboratory? Were significant new results generated or were they entirely predictable from the literature? Were techniques used appropriately; appropriate use of controls? Could the techniques used answer the questions posed? Were the data correctly analysed?

COMMENTS:
__________________________________________________________________
__________________________________________________________________
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E MARK/25
3. **Discussion**  
Is there evidence of ability to integrate literature findings? Of critical analysis by the student leading to alternative interpretations? Is there evidence for understanding of the significance of findings? Ability to speculate beyond present thinking? Ability to discern between circumstantial and definitive experiments and questions?

**COMMENTS:**

__________________________________________________________________
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**OTHER COMMENTS:**

__________________________________________________________________
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E MARK/15

**TOTAL MARK / 50**

EXAMINER’S NAME: ________________________

SIGNATURE: _______________________________ DATE: ________________
## School of Chemistry & Biochemistry

**HONOURS EXIT SURVEY FORM 2013**

<table>
<thead>
<tr>
<th>QUESTION</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
<th>N/A</th>
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</thead>
<tbody>
<tr>
<td><strong>Techniques Course</strong></td>
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<tr>
<td>1. The course at the beginning of the year was a good element of the Honours course.</td>
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<td>2. The components I attended were of relevance to me in my studies during the year.</td>
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<td>3. The timing of the Techniques Course was appropriate.</td>
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<tr>
<td><strong>Seminar 1/Research Proposal</strong></td>
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<td>4. The first seminar was a good component of the course.</td>
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<td>5. The time available for preparation of the first seminar was appropriate.</td>
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<td>6. I received sufficient feedback on my performance in the first seminar.</td>
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<tr>
<td><strong>Seminar 2/Non-thesis seminar</strong></td>
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<td>7. The second seminar was a good component of the course.</td>
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<td>8. The time available for preparation of the second seminar was appropriate.</td>
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<td>9. I received sufficient feedback on my performance in the second seminar.</td>
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<td>10. The topics were interesting and educative.</td>
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<td>11. Written seminar summary was a good component of course.</td>
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<td><strong>Seminar 3/Final seminar</strong></td>
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<td>12. The third seminar was a good component of the course.</td>
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<td>13. The time available for preparation of the third seminar was appropriate.</td>
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<td>14. I received sufficient feedback on my performance in the third seminar.</td>
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<tr>
<td><strong>Thesis literature review</strong></td>
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<td>15. The thesis literature review was a good component of the course.</td>
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<td>16. The time available for preparation of the review was appropriate.</td>
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<td>17. I received sufficient feedback on my performance in the review.</td>
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<tr>
<td><strong>Progress report</strong></td>
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<td>18. Written progress report was a good component of the course.</td>
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<td>19. The progress meeting was a useful session for me.</td>
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<tr>
<td>Project</td>
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<td>A</td>
<td>SA</td>
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<td>20. I had enough time for my project work.</td>
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<td>21. I received excellent supervision and help with my project.</td>
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<td>22. I was given enough opportunity to plan my own strategy and design experiments.</td>
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<td>23. I had very few problems with obtaining facilities/equipment/chemicals which affected my project.</td>
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<td>24. My project work was not impeded by lack of space.</td>
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<td><strong>Oral Defence</strong></td>
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<td>25. The oral defence was undertaken in a fair and equitable manner and I was given adequate opportunity to answer questions.</td>
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<td>26. I knew what to expect at the oral defence, and I felt that I was given adequate guidance beforehand.</td>
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<td>27. I was very nervous during the oral defence.</td>
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<td><strong>General</strong></td>
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<td>28. There were strong social interactions among the entire Honours / Graduate Diploma class.</td>
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<td>29. I enjoyed my Honours / Graduate Diploma year.</td>
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<td>30. The marks and comments on my written work were returned to me in a timely manner.</td>
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<td>31. The supervisor’s assessment is an appropriate component of the course.</td>
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<td>32. Overall, the Honours / Graduate Diploma course was well structured and followed a reasonable timetable.</td>
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<td>33. The Honours Co-ordinator had co-ordinated the course in a fair and reasonable way.</td>
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<td>34. Overall, I felt that the Honours year was very worthwhile (please provide reasons below).</td>
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<td>35. I would recommend the Honours / Grad Diploma course to other students.</td>
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</table>

**SD** Strongly Disagree  **D** Disagree  **N** Neither agree or disagree  **A** Agree  **SA** Strongly Agree  
**N/A** Not applicable

Please provide comments on any of the above course sections or any other issues. What were the strengths of the course? What were the weaknesses of the course and how could it be improved?

Please forward your surveys to: **The Reception Desk in the Bayliss Building**
Policy on Academic Dishonesty including Plagiarism

The Faculty of Life and Physical Sciences has a Policy on Academic Dishonesty which constitutes misconduct and is dealt with under the University's Statute 17, available on line at http://www.secretariat.uwa.edu.au/home/policies/discip?f=8314. These guidelines make reference to the following:

- **Cheating** in tests or examinations, e.g., copying from another student, or taking unauthorized materials into the test or examination room.

- **Plagiarism**, i.e., presenting another's work as though it were one's own, for instance quoting or paraphrasing someone else's opinions, arguments or research findings, whether published or unpublished (e.g., from a book or article, an internet site, or another student's assignment), without clear acknowledgement of the source. (You may quote material from a source, but if you do so, the quotation must be word perfect and, in addition to citing the source reference in the usual manner, the beginning and end of the quotation must be clearly indicated by quotation marks (inverted commas))

- **Falsifying results** of experiments or research studies.

- **Collusion**, e.g., writing an assignment jointly and submitting it as the work of one individual. Although discussion and cooperation are valuable in the pursuit of knowledge and understanding, any work submitted for assessment must be the individual's own work unless it is clearly designated a group project.

- **Helping someone else to commit any dishonest act** such as those listed above.

The consequences for misconduct can be severe, including exclusion from the University. All students are expected to make themselves aware of the definitions and policies relating to academic misconduct, found at the websites below, and with any additional requirements or stipulations that may be provided by individual unit co-ordinators.

http://www.teachingandlearning.uwa.edu.au/tl/academic_conduct

Late Assignments

In the event that a student (prior to the due date) fails to request AND is granted an extension to the date for handing in an assignment, a penalty shall apply. That penalty shall be a reduction by a flat rate of 5% for each day that the assignment is late. For the purposes of calculating penalties, Saturdays and Sundays will be included and counted as one day each.

NO ASSIGNMENT WILL BE ACCEPTED UNLESS THE FOLLOWING DECLARATION IS SIGNED AND DATED

Declaration:

I certify that I have read the University guidelines on Academic Misconduct.

I certify that the attached assignment/report is my own work and that all material drawn from other sources has been fully acknowledged.

I certify that I am aware that the work submitted with this declaration may be submitted to an online plagiarism detection service for analysis.

Signed: ............................................................... Date: ..................................................
## School of Chemistry & Biochemistry
### UNIT CODES FOR ENROLMENT IN THE HONOURS PROGRAM

**Biochemistry (BIOC7700)**
- **First part of the Year** -
  - BIOC7405: Biochemistry Honours Major Research Project Part 1
  - BIOC7407: Biochemistry Honours Written and Oral Skills Part 1
- **Second Part of the Year** -
  - BIOC7408: Biochemistry Honours Written and Oral Skills Part 2
  - BIOC7410: Biochemistry Honours Major Research Project Part 2

**Chemistry (CHEM7700)**
- **First part of the Year** -
  - CHEM7400: Chemistry Honours Written and Oral Skills Part 1
  - CHEM7403: Chemistry Honours Research Project Part 1
- **Second Part of the Year** -
  - CHEM7401: Chemistry Honours Written and Oral Skills Part 2
  - CHEM7402: Chemistry Honours Research Project Part 2

**Genetics (GENE7703)**
- **First part of the Year** -
  - GENE7400: Genetics Honours Written and Oral Skills Part 1
  - GENE7401: Genetics Honours Major Research Project Part 1
- **Second Part of the Year** -
  - GENE7402: Genetics Honours Major Research Project Part 2
  - GENE7403: Genetics Honours Written and Oral Skills Part 2

**Nanotechnology (SCIE7400)**
- **First part of the Year** -
  - SCIE7430: Nanotechnology Honours Written and Oral Skills Part 1
  - SCIE7432: Nanotechnology Honours Major Research Project Part 1
- **Second Part of the Year** -
  - SCIE7431: Nanotechnology Honours Major Research Project Part 2
  - SCIE7433: Nanotechnology Honours Written and Oral Skills Part 2