



University of
St Andrews | School of
Biology

School of Biology

Undergraduate Handbook

2022-23

Welcome to the School of Biology

This handbook provides you with information about degrees taken either wholly or partly within the School of Biology. It is designed to be used alongside the 'University Student Handbook' which you can access at: www.st-andrews.ac.uk/education/handbook, and which contains all the University regulations relating to undergraduate study at St Andrews.

Where to go with questions in the School of Biology:

- Firstly, **please take the time to read through this handbook**, as it should answer most of your general questions.
- If you require further information, the Biology Teaching Office can deal with most general enquiries:
Biology Teaching Office, Biomolecular Sciences Building, University of St Andrews, North Haugh, St Andrews, Fife KY16 9ST
Email: bioteach@st-andrews.ac.uk
University phone: +44 (0)1334 46 3602/3566
- If you are having academic difficulties with any particular module, then it is advisable to arrange to meet the Module Organiser, or to speak to the lecturer if it is a specific question relating to their subject.
- Your Adviser of Studies is the main person and first port of call to contact with general or specific questions not answered in this handbook, relating to your overall performance or progress or your future plans. If you feel more comfortable speaking with another member of staff, you may do so.
- After seeing your Adviser of Studies, questions or difficulties may be brought to:
the Student Welfare Officer, Dr David Shuker (dms14@st-andrews.ac.uk)
OR
the Director of Teaching, Dr Jacqueline Nairn (biodot@st-andrews.ac.uk), for Honours students
OR
the Deputy Director of Teaching, Dr Verena Dietrich-Bischoff (vdb@st-andrews.ac.uk), for Pre-Honours students
It is also the Director of Teaching (Honours) or Deputy Director of Teaching (Pre-Honours) who must be notified of any problems that are affecting your studies.

The School of Biology operates an open-door policy, and you should feel free to approach any one of us at any time with any major issues; please contact the relevant member of staff via e-mail to arrange to meet in person or on Teams. Be aware that staff have teaching and research responsibilities that may take us out of our offices for much of the day, and e-mail is sometimes the most convenient means of contacting us to arrange a meeting.

On behalf of the School of Biology, we very much hope that you find your degree course to be stimulating and challenging and that you enjoy your studies within our School.

Dr Jacqueline Nairn, Director of Teaching

Dr Verena Dietrich-Bischoff, Deputy Director of Teaching

September 2022

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Semester dates 2022-2023

www.st-andrews.ac.uk/semester-dates

Semester 1: Martinmas Semester

Monday 5 September to Monday 26 December 2022

Week	Week commencing	Events
Pre-sessional	Monday 5 September 2022	Orientation week
Week 1	Monday 12 September 2022	Teaching begins
Week 2	Monday 19 September 2022	
Week 3	Monday 26 September 2022	
Week 4	Monday 3 October 2022	
Week 5	Monday 10 October 2022	
Week 6	Monday 17 October 2022	Independent Learning Week (ILW) Raisin Monday: 17 October
Week 7	Monday 24 October 2022	
Week 8	Monday 31 October 2022	
Week 9	Monday 7 November 2022	
Week 10	Monday 14 November 2022	
Week 11	Monday 21 November 2022	
Week 12	Monday 28 November 2022	Revision week Graduation ceremonies Exams begin: Saturday 3 December
Week 13	Monday 5 December 2022	Semester 1 examinations
Week 14	Monday 12 December 2022	Semester 1 examinations
Week 15	Monday 19 December 2022	Semester 1 examinations finish: Monday 19 December

Christmas vacation and inter-semester break

Tuesday 20 December to Friday 13 January 2023

Week	Week commencing	Events
Christmas vacation	Monday 26 December 2022	
Inter-semester	Monday 2 January 2023	
Inter-semester	Monday 9 January 2023	

Semester 2: Candlemas Semester

Monday 16 January to Friday 26 May 2023

Week	Week commencing	Events
Week 1	Monday 16 January 2023	Teaching begins
Week 2	Monday 23 January 2023	
Week 3	Monday 30 January 2023	
Week 4	Monday 6 February 2023	
Week 5	Monday 13 February 2023	
Week 6	Monday 20 February 2023	
Vacation	Monday 27 February 2023	February vacation
Week 7	Monday 6 March 2023	
Week 8	Monday 13 March 2023	
Week 9	Monday 20 March 2023	
Week 10	Monday 27 March 2023	
Week 11	Monday 3 April 2023	
Week 12	Monday 10 April 2023	Revision week
Week 13	Monday 17 April 2023	Revision week Exams begin: Saturday 22 April
Week 14	Monday 24 April 2023	Semester 2 examinations
Week 15	Monday 1 May 2023	Semester 2 examinations May Day holiday: Monday 1 May
Week 16	Monday 8 May 2023	Semester 2 examinations finish: Tuesday 9 May

Graduation

Week	Week commencing	Events
Graduation week	Monday 12 June 2023	Graduation ceremonies - Class of 2023

Reassessment period

Friday 4 August to Wednesday 9 August 2023

Orientation week

This is an integral part of the University semester and students are expected to attend in St Andrews. Orientation week information for new students is available on <https://biology.st-andrews.ac.uk/students/new-students>. Students are also expected to be available for the entire examination period.

Junior Honours students may have “field” courses in the fortnight prior to Orientation week.

Key University contacts

University Switchboard

University phone: +44 (0)1334 47 6161

Advice and Support Centre (ASC)

University phone: +44 (0)1334 46 2020

School of Biology contacts

A full list of the contact details, specific roles and interests of individual staff members is available via the School of Biology’s website (www.st-andrews.ac.uk/biology/people).

Main School roles

Head of School

Prof Frank Gunn-Moore

Deputy Head of School

Dr Simon Northridge

Director of Teaching

Dr Jacqueline Nairn

biodot@st-andrews.ac.uk

Deputy Director of Teaching

Dr Verena Dietrich-Bischoff

vdb@st-andrews.ac.uk

Director of Research

Prof Andrew Brierley

Disability Co-ordinator

Dr Fran der Weduwen

Examination Officer/Assessment Coordinator

Dr Julie Oswald

Deputy Examination Officer

Dr Simon Young

Admissions Officer (International)

Prof Christian Rutz

Admissions Officer (RUK, Home)

Dr David Hughes

Health and Safety Officer

Dr Magnus Alphey

School President

Ava True

biologypresident@st-

andrews.ac.uk

Year Coordinators

1000-level	Dr Susan Gurney
2000-level	Dr Verena Dietrich-Bischoff
3000-level	TBC
4000-level	Dr Iain Matthews

School of Biology Teaching Office

Biomolecular Sciences Building, University of St Andrews, North Haugh, St Andrews, Fife
KY16 9ST

bioteach@st-andrews.ac.uk

University phone: +44 (0)1334 46 3602 or 3566

Open: 9am – 1pm and 2pm – 5pm

Teaching Administrators

Sumit Bains

bioteach@st-andrews.ac.uk

University phone: +44 (0)1334 46 3566

Sarah Harris

bioteach@st-andrews.ac.uk

University phone: +44 (0)1334 46 3602

Pre-Honours Advisers of Studies

Dr Miguel Barbosa

Dr Andy Blight

Dr Verena Dietrich-Bischoff

Dr Helder Ferreira

Dr Carolin Kosiol

Dr Michael Nevels

Dr Fran der Weduwen

Honours Advisers of Studies/Degree Controllers

Behavioural Biology	Prof Sue Healy
Biochemistry	Dr Jacqueline Nairn/ Dr Simon Young
Biology	Dr David Shuker/ Dr Marcus Bischoff
Cell Biology	Dr Marcus Bischoff
Ecology and Conservation	Prof Maria Dornelas
Evolutionary Biology	Prof Sue Healy
Marine Biology	Dr Julie Oswald
Molecular Biology	Dr Susan Gurney
Zoology	Prof Sue Healy
MBiochem	Dr Jacqueline Nairn
MBiol	Prof Oscar Gaggiotti
MMarBiol	Dr Simon Northridge

Advisers of Studies for joint degree students and overseas students

All Biology joint degrees Dr Anne Smith

A list of the degrees taught jointly with other Schools can be found here:

www.st-andrews.ac.uk/subjects/reqs/2022-23/list.html?v=dp

Overseas students (Erasmus/Socrates and JSA/JYA) Dr Iain Matthews

Useful contacts outwith the School of Biology

Library: academic queries about science resources Ms Vicki Cormie

Careers & employability for science students Dr Joshua Crofts

School of Biology building information

Biology Teaching Office

The Biology Teaching Office is located in the Biomolecular Sciences Building, University of St Andrews, North Haugh, St Andrews, Fife KY16 9ST.

Email: bioteach@st-andrews.ac.uk

University phone: +44 (0)1334 46 3602 or 43566

Medical and Biological Sciences Building

The Medical and Biological Sciences Building (**MBSB**) can be found on the North Haugh. The 1000- and 2000-level Biology teaching laboratories are located on the ground floor of this building.

Biomolecular Sciences Building

The Biomolecular Sciences Building (**BMS**) on the North Haugh houses research in molecular and cell biology, virology and immunology. The laboratory on the second floor is the location for some Pre-Honours practical classes, as well as Junior Honours practical classes for Biochemistry and Molecular Biology. Also located on the second floor is a student study and social space, which is open during normal working hours. It has working spaces with power supplies and wireless internet access, chairs and sofas for more relaxed conversations and working, a kitchen area with a fridge, two microwaves and a boiling-water tap, and lockers where you can safely store your belongings during practical classes in the adjacent lab. Commuting students in particular are welcome to use this space in between classes.

Sir Harold Mitchell Building

The Sir Harold Mitchell Building and Dyers Brae House (collectively termed **HMB**) are in the gardens to the south of Queens Terrace. This building houses the Centre for Biological Diversity.

Scottish Oceans Institute

The Scottish Oceans Institute (**SOI**) on the East Sands is a marine research institute. Research takes place on the physiology and ecology of a wide variety of marine organisms. The Sea Mammal Research Unit (SMRU) building is also on this site.

Library & study space

A library facility and study space are available in the **JF Allen Sciences Library** on the first floor of the Physics Building for the use of all students in Biology, Physics and Medicine. Opening times for the library will be posted on the library door at the beginning of semester. Science textbooks, monographs and journals are also available in the **main University Library**.

For further information on use of the University Library and Information Services, please see: www.st-andrews.ac.uk/library/library-spaces

Museum

The **Bell-Pettigrew Zoological Museum** (www.st-andrews.ac.uk/museums/visit-us/bell-pettigrew) in the Bute Building contains a wide range of exhibits showing the diversity of the animal kingdom, and is used in several practical classes. The museum has wireless internet access and is available for use as a reading room during working hours.

Modules

Enrolment for modules

All students are required to pre-advise through MySaint (<https://mysaint.st-andrews.ac.uk/uPortal/f/welcome/normal/render.uP>). Students are also required to meet with their Adviser of Studies at the beginning of each academic year during pre-sessional week. Students also have the option of arranging a meeting with their Adviser of Studies at the start of Semester 2.

Failure to complete academic advising

The University has a policy which formalises how it deals with students who fail to complete the academic advising process.

13:00 h on Monday of Week 2 is established as the hard deadline for completing academic advising. For more information see:

www.st-andrews.ac.uk/students/rules/matriculation/failuretomatriculatepolicy

Practical classes and tutorials

All practical classes and tutorials in the School of Biology are compulsory.

Practical classes are key for understanding the subject you are studying and for developing essential practical skills that underlie the discipline. Information on practical classes for each module will be found in the module handbook.

All students who wish to study 1000- or 2000-level Biology modules must pay a laboratory fee **through the online shop** (<https://onlineshop.st-andrews.ac.uk>).

Tutorials are an important way of developing your skills and knowledge within Biology. At 1000-level, tutorials are embedded within the modules. At 2000- and 3000-level, there is a dedicated tutorial programme that sits outside modules (<https://moody.st-andrews.ac.uk/moodle/course/view.php?id=15292>). These tutorials aim to develop essential scientific and transferable skills and your tutor will likely act as an important referee when you come to apply for internships and jobs. At 4000-level, all modules are taught in small groups and all sessions are compulsory.

1000-level modules

There are **two** 1000-level modules in Biology introducing you to the fundamentals of Biology. Students must have Higher or A-Level (or equivalent) in Biology or Human Biology at grade B or better to take BL1101 and BL1102.

These modules are taught in the following semesters:

Semester 1	Semester 2
BL1101 Biology I Dr Peter Coote	BL1102 Biology II Dr Iain Matthews

Passes in BL1101 and BL1102 are required for entry to the 2000-level modules in Biology. All students pursuing a degree programme within the School of Biology must pass both of these modules, thus acquiring 40 credits at 1000-level Biology.

Full details (including credit weighting, class hours, assessment method and description) of all Biology (BL) modules can be found in the online course catalogue (www.st-andrews.ac.uk/coursecatalogue/ug/2022-2023).

2000-level modules

There are **twelve** 2000-level modules in Biology. Science students may take up to **any four** together in one semester as part of their degree, since the timetables are compatible; Arts students may take only two in any one semester. Students studying for a biology degree **must take** BL2300 Research Methods in Biology in Semester 1.

These modules are taught in the following sequence:

Semester 1	Semester 2
BL2300 Research Methods in Biology Dr Verena Dietrich-Bischoff	BL2305 Cell Systems Dr Fran der Weduwen
BL2301 Cell Biology Dr Judith Sleeman	BL2306 Biochemistry Dr Jacqueline Nairn
BL2302 Molecular Biology Dr Helder Ferreira	BL2307 Ecology Prof Oscar Gaggiotti
BL2303 Evolutionary Biology Dr Kelly Robinson	BL2308 Vertebrate Zoology Dr Verena Dietrich-Bischoff
BL2304 Invertebrate Zoology Dr Monika Gostic	BL2309 Applied Molecular Biology Dr Simon Young
BL2311 The Oceans Dr Julie Oswald	BL2312 Behavioural Biology Prof Sue Healy

Lecture and practical times of Biology 2000-level modules

Lecture and practical times for Biology 2000-level modules are listed in the course catalogue. There will be three lectures one week and two lectures the following week, or vice versa, for all Biology 2000-level modules, with the exception of BL2300 Research Methods in Biology (see course catalogue www.st-andrews.ac.uk/coursecatalogue/ug/2022-2023). All Biology 2000-level modules will have one practical every two weeks, with the exception of Research Methods in Biology (see course catalogue). Note that pairs of modules (e.g. BL2307 and BL2308) use the same lecture slot and the same days for the practical classes but the weekly schedule alternates, so there are **no** timetabling clashes.

When you select your 2000-level modules, keep in mind the programme requirements for specific Honours degrees. The School of Biology offers a variety of Single Honours degrees and a number of Joint Honours degrees combining Honours modules taught by the School of Biology with modules taught in other Schools.

The degree programmes and their programme requirements can be found in the online course catalogue. Candidates for Honours degrees should note that some Honours modules also have specific entrance requirements – make sure you check the course catalogue (www.st-andrews.ac.uk/coursecatalogue/ug/2022-2023) and talk to your Adviser.

3000-level modules

All students are required to pre-advise through MySaint (<https://mysaint.st-andrews.ac.uk>) and will see their Adviser of Studies at the beginning of the academic year.

All students entering Honours in the School of Biology are required to take the BL3320 Statistical and Quantitative Skills for Biologists module; please make sure you pre-advise into this module in May along with your other core 3000-level modules for your degree programme.

In addition, all students taking any Honours degree in the School of Biology are required to attend either BL3000 Field Course or BL3322 Basic Biochemistry Laboratory. **These courses take place during the summer vacation, usually just prior to Orientation week; you MUST ensure you are available to take the course if it is required as part of your degree programme.**

Thus, all third-year students take:

BL3320	Statistical and Quantitative Skills for Biologists	10 credits
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And all students choose one from:

BL3000	Field Course	10 credits
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BL3322	Basic Biochemistry Laboratory	10 credits
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Students intending to enter Biochemistry, Molecular Biology or Cell Biology Honours degrees (or taking certain 3000-level modules) should attend compulsory Radiation Protection and Safety courses. These will be run during orientation week and details will be sent out.

For those degree courses in which choice of modules is allowed, your Degree Controller/Adviser must approve your choice. Module choices are outlined in the course catalogue for each degree programme:

www.st-andrews.ac.uk/coursecatalogue/ug/2022-2023

4000-level modules

All 4000-level Biology modules (apart from the project modules) are worth 15 credits. Students must either enrol for BL4201 (Experimental Research Project, worth 60 credits) and FOUR 15-credit modules, or BL4200 (Literature Project, worth 30 credits) and SIX 15-credit modules. The selection and allocation of projects are carried out towards the end of semester 2 of your JH year. More details will be given closer to the time, but it is wise to start thinking about areas of interest as you proceed through your JH year.

Where there are choices between modules in the programmes detailed in the course catalogue, some options may have pre-requisites so that the Pre-Honours or JH modules taken may limit choices.

The availability of 4000-level modules in a given year in the School of Biology will be dependent on sufficient student demand. The School operates a capping process for modules at 4000-level.

5000-level modules

Students studying for a BSc Single Honours degree can take up to **two** 15-credit 5000-level modules in their fourth year. Students on the MBiochem, MBiol and MMarBiol degree programmes must take at least 90 credits in 5000-level modules, including those defined as compulsory for the degree programme and up to 30 credits in 4000-level modules.

Expectations of students

- It is expected that you will let someone in the School of Biology (Adviser of Studies or Module Organiser or Biology Teaching Office bioteach@st-andrews.ac.uk) know if you are having problems that are affecting your academic studies. The sooner we know about any issues, the sooner we can do something to help. It is difficult to make allowances retrospectively.
- It is expected that you attend all of the lectures given in the module. It is clear to School of Biology staff that non-attendance at lectures leads to poor performance in assessments.
- It is expected for students to have all electronic devices set to silent and non-vibrate whilst in class.
- Laptops are permitted in taught classes (lectures, tutorials and practical classes) for taking notes and gaining access to material directly relevant to the lecture ONLY.
- If you are late for a lecture, please enter as quietly as possible (by the rear door if possible). It is respectful to apologise for your lateness at the end of the lecture.
- It is expected that you fully engage with all activities (both assessed and non-assessed) as part of your learning experience.
- Whilst we often encourage open discussion between students about your work, it is expected that you do NOT make available your work or the work of others to fellow students in electronic format, e.g. on a data stick or left on a public/shared desktop. To do so puts temptation to commit academic misconduct in front of your peers, and can in itself constitute academic misconduct. If you are in any doubt about the appropriateness of your actions, please ask.

Recording devices in lectures

If you have a disability or medical condition which means that you are unable to take notes in lectures, you may seek permission from Student Services to use a voice recorder or other computer-based device to record lectures and/or tutorials. If you are not authorised by Student Services to record lectures, then you must request permission from the relevant academic member of staff prior to the lecture taking place. More information is available here: www.st-andrews.ac.uk/policy/academic-policies-learning-and-teaching-recording-devices-in-lectures-and-tutorials/use-of-recording-devices-by-students-in-lectures.pdf

Communications

Module Organisers may use:

- e-mail
- Teams chat
- Moodle announcements/videos

to contact you, so please check these regularly.

Students are required by University regulations to check e-mail every 48 hours during the week, as e-mail is recognised as an official means of communication within the University.

There will be regular e-mail updates on general student matters from the Biology Teaching Office and on <https://biology.st-andrews.ac.uk/students>; we will try to keep these to a maximum of once per week.

When e-mailing a member of staff, please:

- use your University of St Andrews e-mail account
- include your full name
- include your matriculation number
- make clear which module you are referring to

All modules will have an online module handbook ([https://synergy.st-andrews.ac.uk/biocurrentstudent/online module handbooks](https://synergy.st-andrews.ac.uk/biocurrentstudent/online_module_handbooks)), Teams and Moodle page where updates on module arrangements and lecture outlines/handouts will be posted. Check these sites regularly and make sure to look at them first before contacting staff.

Absence from classes

Attendance is a basic assessment requirement for credit award, and failure to attend classes or meetings with academic staff may result in your losing the right to be assessed in that module. Please note that you will be awarded a grade of 0X (see reporting codes on p20) for a module if you miss three or more practical classes.

Please ensure that you are familiar with the 'Academic alert' policy (www.st-andrews.ac.uk/students/academic/academic-advising/glossary/academic-alert). If you have missed timetabled classes/events or any other compulsory elements of the module due to illness or an unavoidable pre-arranged event or appointment, you must complete a Self Certificate of Absence form as soon as possible. Please go to <https://mysaint.st-andrews.ac.uk>, where the relevant section can be found under 'My Details'.

Under certain circumstances, Schools may request further documentation in addition to the Self Certificate. In this case, students should contact Student Services in order to organise the appropriate documentation. If you submit more than three Self Certificates in a single semester, or if the period of absence extends to more than two weeks, you may be contacted by Student Services, the relevant Associate Dean, or by an appropriate member of staff in your School.

Completion of a Self Certificate is not an acceptable substitute for contacting your tutors well in advance if you have to be absent. Advance notice of absence is acceptable only for good reason (for example, a hospital appointment or job interview). It is your responsibility to contact the appropriate member of staff to complete any remedial work necessary.

If you are an international student (non-EEA nationals only), you will be affected by recent changes introduced by the UK in relation to immigration rules and visas. The University is now legally bound to report to the UKVI any student who fails to enrol on a module or programme of study, or who fails to attend, or who discontinues their studies.

Absence from examinations

Absence from examinations due to illness or any other unavoidable reason should be reported by submitting a Self-Certificate of Absence form as soon as you are able to do so, preferably before the examination is due to take place, and in any case no later than three days after the

examination. You must contact the School responsible for the module being examined in order to request alternative arrangements, which are at the discretion of the School.

In the School of Biology:

- all Year 1- Year 2 students experiencing difficulties on the approach to the exams should contact the Deputy Director of Teaching, Dr Verena Dietrich-Bischoff
- all Year 3-Year 5 students experiencing difficulties on the approach to the exams should contact the Director of Teaching, Dr Jacqueline Nairn
-

You are only required to notify the University Examinations Officer if there is a problem submitting the Self Certificate.

Contact:

Examinations Officer

Walter Bower House, Eden Campus

Main Street, Guardbridge

St Andrews, KY16 0US

University phone: +44 (0)1334 46 2493

Email: examoff@st-andrews.ac.uk

Information on how to report special circumstances and/or advice on S-coding can be found here:

www.st-andrews.ac.uk/education/handbook/special-circumstances

Passing the module

At **1000-level**, you are required to achieve \geq grade 7.0 in the continuous assessment to pass the module.

At **2000 level**, you are required to achieve \geq grade 7.0 in the continuous assessment, \geq grade 7.0 in the exam and \geq grade 7.0 overall to pass the module.

At **Honours** (3000-, 4000- and 5000-level), you are required to achieve \geq grade 7.0 overall to pass the module.

Module results reporting codes

Value	Code	Description
7.0 - 20.0	P	Pass
4.0 - 6.9	F	Fail (with right to reassessment)
0 - 3.9	F	Fail (with no right to reassessment)
	0X	Failed to meet module requirements, no permission to proceed
	0D	Deferred assessment
	0Z	Result undecided: the result may be unresolved due to mitigating circumstances, or for some other valid reason. This is a temporary code and will be changed to one of the other definitive codes on the list as soon as the matter is resolved.
	S	Study on this module impacted by special circumstances

Continuous assessment

All continuous assessment (CA) work should be submitted bearing only your matriculation number, not your name.

Pre-Honours

At Pre-Honours level, the continuous assessment component of the module will consist of no more than FOUR items, except BL2300 with five items. All items of continuous assessment must be submitted to an appropriate standard (submitting an assignment containing just a title is not sufficient, for example), in order to fulfil the requirements of the module.

The marks for each item of continuous assessment are recorded as grades on the 20-grade point common reporting scale (see p26). Each student's marks are averaged, considering the weighting of each coursework item, to generate their final continuous assessment mark for the module. Any items of work for which an appropriate Self Certificate has been presented *may* be excused, up to a total maximum of 20% of the continuous assessment, but this can only happen at the discretion of the Module Organiser.

Note, however, that the Module Organiser has the right to ask for the completion of an alternative assessment to make up for the missed work (also see also penalties for late submission later in this handbook).

All grades can be subject to final mapping at the Module Board should the External Examiner request it, and students should be aware that whilst the reported grade is a good indication of performance it may still be subject to modification.

Junior Honours

At Junior Honours level, continuous assessment marks should be generated on the 20-grade point scale. The final CA mark is the weighted mean of these grades. The marks for most items of work will be recorded as a whole grade point, whilst the mean CA mark is recorded to one decimal grade point. All items must be submitted in order to fulfil the requirements of the module. You cannot be excused any piece of continuous assessment work at Honours level; if you are ill or absent from class, then you must complete an alternative assessment set by the Module Organiser, or appropriate member of staff.

Please note that **attendance at practical classes is essential and compulsory**. This includes all field visits and outings arranged as part of the module. You may lose credit for the module for non-attendance, even if a visit or outing is not formally assessed.

Senior Honours

There is no set format for the assessment of Senior Honours modules. Some SH module grades will be determined by CA only, whilst other modules may include an exam. As in JH, you cannot be excused any piece of assessed work at SH level; if you are ill or absent from class, then you must complete an alternative assessment set by the Module Organiser, or appropriate member of staff.

Referencing

The reference style you should use for all pieces of work completed for the School of Biology is the **Harvard Referencing system**. If you are unsure of what the nuances of this system are, then there are very good guides available online (also see section on References below). The library produces a referencing style guide, which can be found here:

https://libguides.st-andrews.ac.uk/Referencing_styles

You may wish to use a reference management software, such as Endnote (available through Apps Anywhere) or Mendeley (freely available online). Advice can also be found on the Library website (<https://libguides.st-andrews.ac.uk/c.php?g=369299&p=2495720>).

Plagiarism detection software

Text-based components of the CA submitted electronically will be screened by the University's electronic plagiarism detection system (Turnitin) through electronic submission on MMS.

Students should ensure they are familiar with the University's Good Academic Practice guide and policy (www.st-andrews.ac.uk/students/rules/academicpractice).

Good Academic Practice

Academic integrity is fundamental to the values promoted by the University. It is important that all students are judged on their ability, and no student will be allowed unfairly to take an advantage over others, to affect the security and integrity of the assessment process, or to diminish the reliability and quality of a University of St Andrews degree. All work submitted by students is expected to represent Good Academic Practice.

Students should ensure they are familiar with the University's Good Academic Practice guide and policy (www.st-andrews.ac.uk/students/rules/academicpractice).

The University's Good Academic Practice policy covers the behaviour of both undergraduate and postgraduate students. The full University policy and procedure, as well as a helpful guide for students, is available from: www.st-andrews.ac.uk/policy/academic-policies-assessment-examination-and-award-good-academic-practice/good-academic-practice.pdf

Students who are unsure about the correct presentation of academic material should approach their tutors, and may also contact CEED for training (www.st-andrews.ac.uk/ceed/study-skills/academicskills).

Avoiding academic misconduct

In addition to the advice given online, the School of Biology would like to highlight that:

1. In the process of writing, **never ever** be tempted to cut and paste information or text from other documents (including lecture notes or other material provided by teaching staff) or webpages into your work – even if the intention is to rewrite it in your own words later. There is a real risk that you forget to do so or forget which bits of the document are your own words or those of another writer.
2. **Never** share your work (data analysis, Excel spreadsheets, or Word documents) electronically with a fellow student (unless the piece of assessment concerned is group work and the student is a member of your group). A student providing work in this way

is just as guilty of academic misconduct as a student using the work. Protect your work, never leave it on desktops of shared computers and guard data sticks with extreme care.

Non-academic misconduct

As members of the University community, students are expected to behave appropriately, with due care, consideration and respect to others, and to uphold certain standards (see www.st-andrews.ac.uk/students/rules/conductdiscipline/conduct). Persistent or serious misconduct will be dealt with via the non-academic misconduct policy (www.st-andrews.ac.uk/students/rules/appeals/non-academicmisconduct).

If you are affected by poor behaviour of a fellow student, support is available here:

<https://reportandsupport.st-andrews.ac.uk>

www.st-andrews.ac.uk/students/advice/personal/beingbulliedorharassed

Submission of coursework

All coursework that requires assessment must be submitted to MMS (note that also some formative pieces of work, which do not count towards the module grade, might require submission to MMS). Students must submit the work in the correct file format. Make sure you know the deadline for each piece of work and allow yourself enough time for submission – **don't** leave it to the last minute. Note that it might take a while for work to be uploaded to Turnitin. In addition, make sure all work handed in is clearly labelled with your matriculation number, module code, assignment title and the name of the person setting the work.

Deadlines for the submission date and time will be given in the relevant course literature and on MMS.

Extensions

In all cases, extensions should be requested BEFORE the submission deadline, not after.

Extensions can ONLY be granted on the grounds of ill health or other extenuating circumstances (www.st-andrews.ac.uk/policy/academic-policies-student-progression/extenuating-circumstances.pdf) and with appropriate supporting evidence. If granted, there is no grade point penalty as long as you submit the piece of work by the new deadline. You must contact the Module Organiser, the Student Welfare Officer or the (Deputy) Director of Teaching, stating the reason for requesting an extension. If you are in any doubt,

contact the (Deputy) Director of Teaching regarding the delay to your studies as soon as you can.

Penalties for late submission

If work is submitted late, there will be a strict penalty applied of 1 grade point per day or part thereof (www.st-andrews.ac.uk/policy/academic-policies-assessment-examination-and-award-coursework-penalties/coursework-penalties.pdf).

Every day of the week will be considered as counting towards a late penalty. This rule will apply to all holidays (public and University) and includes weekends, with Saturday and Sunday each counting as one day. Work submitted up to 14 days late will be marked and will receive the appropriate late penalty. Work submitted later than 14 days from the agreed submission date will be graded 0; you will, however, be able to receive feedback on the work.

You must endeavour to contact the Module Organiser before the submission deadline to explain the reason for lateness. The School Teaching Office will keep a record of all Self Certificates, and more than two late submissions may be followed up by the Director of Teaching or Student Services. You may be asked to provide more formal certification if you have a record of frequent Self Certification – so please do not abuse the system.

Word limits

A written coursework assignment may have a specified length in number of words, either as an indicative guideline, or as a requirement enforced by penalty. Failure to adhere to a required word length is penalised according to a scheme specified for the assignment. The penalty scheme is chosen according to the nature of the module and the particular assignment.

In the School of Biology, students generally are permitted to submit work that is 10% over the word limit ascribed to a piece of work without incurring a penalty, unless expressly prohibited in the relevant module literature. Thereafter, the marker may deduct 1 grade point for each additional 10% over the word limit.

For the University policy on penalties for late work and/or work of incorrect length, see: www.st-andrews.ac.uk/policy/academic-policies-assessment-examination-and-award-coursework-penalties/coursework-penalties.pdf.

Incorrect submission

Please ensure that you have uploaded the correct file to the correct location on MMS. You will have the opportunity to review your work prior to selecting 'Submit'. Once submitted, please check the correct the file has been uploaded to MMS.

If you inadvertently submit the wrong file and you realise this **before** the deadline has passed, please replace the file or, if this does not work, e-mail the Biology Teaching Office and the Module Organiser, attaching the correct file to your e-mail.

If you realise that you have submitted the wrong file **after** the deadline has passed, then you should immediately e-mail the correct file to the Biology Teaching Office and the Module Organiser. However, be aware that in this situation late penalties WILL accrue, with the time of submission being regarded as the time of arrival of the e-mail with the correct file attached.

Language correction

If you have received any help with your coursework (e.g. proofreading or language correction), you are now required to explicitly acknowledge that help in the following signed declaration at the front of the submitted work:

'I, [INSERT MATRICULATION NUMBER], received particular assistance in the writing of this work in respect of matters of grammar, style, vocabulary, spelling or punctuation.

The assistance was provided by (delete as appropriate):

- A member of the academic staff
- A non-academic member of staff
- A fellow student'

(If you have a registered disability with an allowance for a proofreader, then please check with Student Services as to how the above policy applies to you).

Suspected use of non-permissible types of adjustment will be treated as plagiarism. For more detail, see the University Policy on Language Correction (www.st-andrews.ac.uk/policy/academic-policies-learning-and-teaching-language-correction/language-correction.pdf).

Writing/Study skills

If you are struggling with writing/study skills, there are a number of resources that you can use.

Academic English Service:

AES offers free workshops, tutorials and online materials for all St Andrews students who use English as a second or additional language.

www.st-andrews.ac.uk/international-education/aes

Centre for Educational Enhancement and Development (CEED) Academic and Study

Skills: Academic support is available on a wide range of topics, including:

- Planning and writing essays, reports or critical reviews
- Reading for comprehension
- Note-taking
- Studying for exams
- Citing and referencing
- Managing time

www.st-andrews.ac.uk/ceed

Academic Skills Project (ASP):

The Academic Skills Project is a Postgraduate student-led resource for undergraduates of all degree stages. It comprises informal discussion-style workshops, which focus on different Biology-specific skills. The workshops address topics such as referencing, reproducibility and presenting data, but workshop leaders will be happy to answer any other questions you may have. In 2022-23, the workshops will be run in person, but useful resources will also be posted on the ASP Teams page. Join the Teams page for up-to-date information on workshops and other useful resources (search Academic Skills Project – Biology, or alternatively join using the Teams code 2h47fj7).

Feedback and return of coursework

Staff in the School of Biology are asked to return all marks and feedback to students within 3 weeks of coursework submission.

Students will receive feedback on any work that they have submitted. Feedback will give you advice that will guide you in improving your learning and future performance, so please

consider feedback carefully. Feedback opportunities vary from module to module but can include individual face-to-face discussion, or electronic feedback through Moodle or MMS.

Staff in the School of Biology aim to provide feedback and provisional grades in a timely manner for all assessments. It should be noted that, as part of our quality assurance processes, all grades reported on MMS are provisional until they are approved at Module Exam Boards.

Assessing your progress

As well as giving you written comments on your work, staff grade each piece of assessed coursework based on the University's 20-point grading system. This gives you some idea of your standard, but be careful to interpret the marks cautiously. It is easier to do well in coursework than in exams; a string of good coursework marks does not necessarily mean that you are heading for an equally good module grade. Please make sure that you download your graded work once feedback is available, as it is important to read the feedback on your work so that you can then find out where you went wrong, and what you did well. You can then build on that knowledge as you continue through the module and your degree. For most modules, you will normally be assessed by written examinations at the end of **each semester** (see below). This will provide you with further feedback on your progress.

You must see your Adviser of Studies at the start of each academic year to discuss your work in the previous year, any problems that have arisen, and your plans for after you graduate. In particular, your Adviser of Studies at Honours (the Degree Controller) is your main point of contact with the staff in Honours and it is important that they get to know you and your work well, to be able to write references for you when you apply for jobs etc..

Common reporting scale (20-point)

The University uses a 20-point common reporting scale for grades (i.e. a 20-point basic scale reported to one decimal point for final module grades). Details of the common reporting scale can be found at www.st-andrews.ac.uk/staff/teaching/examinations/scale.

Examinations

Each of the modules that you take will be assessed by continuous assessment and/or an exam at the end of the semester in which the module is taught. If you satisfactorily complete the work of the module, you will receive the credits, which will accumulate towards your

degree. You will also receive a classification of the quality of the work that you have achieved on the module, which will be in the form of the 20-point grade system.

Exam format

During 2022/23, all exams in the School of Biology will be conducted online and will be open book (for guidance, see www.st-andrews.ac.uk/exams). If your module has a class test, please check the module handbook/introductory lecture for the class test arrangements.

1000-level modules

No exam, continuous assessment only

2000-level modules

2-hour exam consisting of three sections with different weightings:

Section A (40%): 1 out of 3 essays (1200-word limit)

Section B (40%): 1 compulsory problem-solving question consisting of multiple parts

Section C (20%): 20 compulsory multiple-choice questions

3000-level modules

2-hour exam consisting of three sections with different weightings:

Section A (50%): 1 out of 3 essays (1500-word limit)

Section B (33.3%): 1 compulsory problem-solving question consisting of multiple parts

Section C (16.7%): 2 compulsory short answer questions (300-word limit for each)

Note that the exam format is different for BL3320 Statistical and Quantitative Skills for Biologists.

4000- and 5000-level modules

The wide variety of assessment methods demands flexibility in exam format, so there is no standardised exam format for 4000- and 5000-level modules.

Past exam papers

Past exam papers are available through MySaint, see:

www.st-andrews.ac.uk/exams/preparation

Illegible exam scripts

For the online exams, your answers need to be typed, but some small parts might still be handwritten (e.g. calculations, with your working explained, or figure legends). It is your responsibility to ensure that any handwritten parts are legible and can be read by the markers. If your handwriting cannot be read by the marker, then this could result in a delay in confirming your module grade. You may be charged for a transcription service and could be required to return to the School(s) concerned in order to transcribe the script. If you have already left St Andrews, then you will have to bear the costs of any return travel to the University. More information is available at: www.st-andrews.ac.uk/policy/academic-policies-assessment-examination-and-award-illegible-exam-scripts/illegible-exam-scripts.pdf

Illness during exam time

It is quite normal to feel nervous before exams, and this can lead to symptoms such as headache, queasy stomach, poor sleep etc. It is best not to worry too much about this – remember that many of your classmates will have the same problem, and it is very unlikely to affect your performance. If things are more serious than that, then contact Student Services who run support sessions for students experiencing significant exam anxiety.

If you are genuinely too ill to sit the exam on the set date, or if a non-medical but serious incident prevents this, then you can apply to have your exam deferred (www.st-andrews.ac.uk/students/advice/academic/exams). However, deferral is a serious issue; it is NOT automatically granted and might only be allowed if you can produce medical or other external documentation to support your case. Deferred exams are sat in the August re-assessment diet.

You should always take action **before** you sit the exam, since deferral is not intended as a remedy for simply poor exam performance. If you notify the School of an issue after the event, it is **very** unlikely that it will be taken into account without exceptional justification. You can, of course, at any time seek advice from Student Services or a member of the School staff.

The procedure if you expect to miss an exam and require to request an exam deferral is:

1. Submit a Self Certificate of Absence form
2. Contact the Biology Teaching Office by University phone: +44 (0)1334 46 3602 or 3566) or e-mail (bioteach@st-andrews.ac.uk)
3. Organise the production of the necessary external documentation to support your case
4. You might want to discuss the issues affecting you with Student Services by University phone: +44 (0)1334 46 2020 or e-mail (theasc@st-andrews.ac.uk)

Please note that you may be required to pay a fee, typically around £30, to obtain medical documentation from your GP. The University's policy on Deferred Assessment can be found within the following document: www.st-andrews.ac.uk/policy/academic-policies-assessment-examination-and-award/assessment-policies-and-procedures.pdf.

Calculators

You are expected to provide your own calculator for any exam or class test in which it might be needed (or even useful). Your calculator should have the standard scientific functions (and, of course, you should know how to use these).

Graphs and diagrams

Some exam questions might require you to produce a graph, or you may wish to support your answer with a figure. For the online exams, you can use a graphing software (e.g. Excel or R) to create graphs. You also can draw graphs and figures by hand, take a picture and insert this into your answer (see www.st-andrews.ac.uk/exams/submit for guidance). It is NOT allowed to copy and paste figures from the internet, scientific papers or lecture notes etc.

Exam advice

The usual exam advice applies. Always read the question carefully and make sure that you answer all aspects of it. If you have an hour to answer a question, it is sensible to spend a few minutes thinking and planning, before you actually start writing the answer. Organisation and structure are amongst the criteria for which marks are awarded, so planning time is definitely not wasted time. **Always** attempt every question that you are required to answer; a sure-fire way to receive zero is to write nothing. Even very brief and incomplete answers will usually gain you a few marks, which will be better for your average than a zero. If you answer *more* than the required number of questions, we will mark them all and give you the highest marks compatible with any question paper sectioning – but this is not a recommended strategy.

Feedback on examinations

Feedback on examination performance is typically provided as detailed feedback from the question setter. The Biology Exams Officer or the Biology Teaching Office will be in touch at the start of each semester to offer viewing of exam scripts from the previous exam period. Once you reserve an exam viewing slot, a member of staff will access your exam paper and

share this with you via Teams. You should note that you are not permitted to record or photograph this session.

Reassessment of failed modules

Reassessment of a failed module is permitted if the module grade awarded is between 4.0 and 6.9 (inclusive). Grades reported as less than 4.0 do not allow you to take a resit, and the module (or a substitute module, if this is not a core module) must be retaken in its entirety the following year.

1000-level

Reassessment of 1000-level modules is by submission of alternative coursework.

2000-level

Reassessment of 2000-level modules follows the following scheme:

If exam failed: 2-hour written resit exam = 50%, existing coursework = 50%

If coursework failed: Existing exam = 50%, new coursework = 50%

If both coursework and exam failed: 2-hour written resit exam = 100%

3000-level

Reassessment of 3000-level modules (except BL3000, BL3320 and BL3322) follows the following scheme:

2-hour written resit exam = 50%, existing coursework = 50%

Reassessed modules at Honours level are capped at grade 7.0.

4000- and 5000-level

Reassessment of 4000- and 5000-level modules depends on how the module is assessed in the first place. Please check the course catalogue for individual modules (www.st-andrews.ac.uk/coursecatalogue/ug/2022-2023).

Reassessed modules at Honours level are capped at grade 7.0.

Progression

Progression to 2000-level

Progression from 1000-level to 2000-level Biology is dependent on passing both BL1101 and BL1102 and gaining 80 credits in the year.

Progression from Pre-Honours to Honours

For students on the BSc Honours programmes in the School of Biology who enter Honours before October 2023, Honours entry will automatically be granted if the **four requisite** 2000-level modules for the degree programme are passed (either at first sitting or at resit in the August reassessment diet). Students will only be permitted to trail a maximum of 20 Pre-Honours credits and one module into Honours.

Entry to the Integrated Masters programmes in Biochemistry (MBiochem), Biology (MBiol) and Marine Biology (MMarBiol) will automatically be granted for students gaining an average grade of at least 15.0 across their requisite 2000-level Biology modules. This average grade must be achieved at first sitting in the first enrolment in each module.

To find out which modules are prerequisite for a specific degree programme, please consult the course catalogue (www.st-andrews.ac.uk/coursecatalogue/ug/2022-2023).

The University's Honours entry policy can be found at:

www.st-andrews.ac.uk/students/academic/academic-advising/glossary/honours-entry

Note that this policy includes mitigations introduced in response to the COVID-19 pandemic. After October 2023, these mitigations will expire and more stringent requirements may be re-introduced.

The School of Biology has no discretion on student applications for entry to Honours. If you have any concerns regarding entry to Honours, please contact your Adviser of Studies or the Deputy Director of Teaching or the Director of Teaching as soon as possible.

Requests for review of decision for entry to Honours

Students who fail to meet the requirements for entry to Honours and are consequently refused entry to their chosen degree programme are eligible to request a review of this decision on certain grounds, set out here:

www.st-andrews.ac.uk/policy/academic-policies-student-progression-entry-to-honours/requests-for-review-of-decision-for-entry-to-honours.pdf

What if I don't get into Honours?

Hopefully, you will be successful in securing a place in Honours in the School of your choice. If you are unsuccessful in obtaining a place in Honours in the School of your choice, you will be registered as a General degree student.

Progression from Junior Honours to Senior Honours

Your performance during the Junior Honours year will be monitored, and in order to progress to the Senior Honours year you must achieve full credits on all of the modules that you take and pass the modules at a sufficient standard to proceed to the Senior Honours year. If, for any reason, we are concerned about your progress during your Honours years, it is possible that we will ask you to attend a review meeting with the Director of Teaching.

Degree regulations

A regulatory structure determined by Senate and Court governs the award of all degrees.

Undergraduate and Postgraduate Resolutions and Regulations are available at:

www.st-andrews.ac.uk/students/rules/ugsenateregulations

www.st-andrews.ac.uk/pgstudents/rules/pgsenateregulations

Honours classification

The University applies a common formula for the calculation of the award of Honours classifications. Degrees are classified using a credit-weighted calculation of grades achieved for Honours-level modules (3000-level and above) taken during an approved Honours programme. There are no discretionary classification border zones and only one decimal point is used in calculations of means and medians.

Full details of the University's Honours classification algorithm (and how S-codes are taken into account) can be found here:

www.st-andrews.ac.uk/policy/academic-policies-assessment-examination-and-award-honours-degree-classification/honours-classification.pdf

Deans' List

This is an annual award for academic excellence, promoted by the Deans of the University. Undergraduate and Postgraduate Taught students who achieve an outstanding overall result in the course of an academic year have their names inscribed on the Deans' List, an honour which will also appear on their University transcript. Any student who meets a certain set of conditions and who obtains a credit-weighted mean grade of 16.5 or above for the year will be recorded on the Deans' List.

Full details of all the criteria and conditions for the Deans' List are available at:

www.st-andrews.ac.uk/students/academic/awards/universityprizes/deanslist

and

www.st-andrews.ac.uk/policy/academic-policies-assessment-examination-and-award-pgt-guidelines-for-credit-grades-and-awards/pgt-guidelines-for-credit-grades-and-awards.pdf

Prizes and medals

As well as the Deans' List and Class Medals (awarded to the best student in each year if considered worthy of the award), the following prizes are awarded to Pre-Honours students:

Tay Salmon Fisheries Co. Ltd. Prize – Awarded to the best first-year student in Biology.

Margaret Laing Bell Prize (First Year) – Awarded to the outstanding first-year student in the field of Environmental Biology.

Margaret Laing Bell Prize (Second Year) – Awarded to the outstanding second-year student in the field of Environmental Biology.

D'Arcy Thompson Prize (Second level) – Awarded to the best student in second-level Organismal Biology.

MacLeay Prize for Ecology – Awarded for performance in the second-year Ecology module.

And the following special medals and prizes are awarded to Honours students:

Dr John J Durward Prizes – Awarded (a) to the student in the Senior Honours Biochemistry class who has the best consistent record in that subject; and (b) to the student who produces the best Honours project thesis in this subject area.

Margaret Laing Bell Prizes – Awarded to an outstanding Junior Honours and Senior Honours student in Environmental Biology.

Margaret Pickering Prize – Awarded to the outstanding student in the field of Molecular & Cell Biology.

Margaret Lang Prizes in Marine Biology – Awarded (a) to an outstanding student in Marine Biology; and (b) to the student who produces the best Honours project thesis in this subject area.

D'Arcy Thompson Medal and Prize in Natural History – Awarded to the best first-class Honours student in Zoology or a related subject area, if considered worthy of the award.

Andrew Oliver Memorial Prize – Awarded for Field Studies in Biology (in BL4603 (MBiol & MMarineBiol) or BL5498).

The Physiological Society Undergraduate Prize for Physiology – Nominees to include students who produce the best Honours project in Physiology.

The Biochemical Society – Awarded to the best Honours student in Biochemistry, if considered worthy of the award.

The Royal Society of Biology – Awarded to the best Honours student in Biology, if considered worthy of the award.

Practical work in Biology

There are two aims to the practical classes. The first, of course, is to reinforce concepts and ideas from the lecture course. The second aim, which is equally important, is to begin to train you in some of the general skills that all scientists require.

In first year, your practical classes will include use of the light microscope, PCR, genetics, a wide range of plant and animal material and visits to St Andrews Botanic Gardens and the rocky shores at Kinkell Braes. During the year, we also shall concentrate on teaching you to write up and illustrate reports, use elementary statistics, and organise and improve the style of your writing. You will be asked to do small tasks in pairs or groups. You will be assigned a demonstrator whom you will keep for the duration of each module.

In second year, practical classes are more specifically tailored to the modules, and we will expect a bit more initiative from you. The approaches taken will be very varied, and you will be asked to think more deeply about the biological principles and to take a role in designing some experiments yourself. Skills acquired in first year are reinforced, and new ones gradually introduced.

At Honours level, practical classes are more specialised and offer you greater freedom in terms of experimental design and investigation.

The use of animals in practical classes

The School of Biology understands that some students may be concerned or apprehensive about dissection or the use of animals. Students who take modules in Biology must realise that these modules do involve looking at prepared animal material and in some cases preparing it themselves. We believe that it is part of our job to teach you to have a responsible attitude towards the use of animal material and it is right and proper for all of us to think seriously about this issue.

We feel it is reasonable in the first year for you to be given the chance to think your attitude through carefully and with our help. In BL1102, you will have the opportunity to dissect material which we feel is essential; but we shall not insist that you carry out these practicals or penalise you for not doing so. We shall expect you to make an effort to acquire the knowledge and skills in other ways, as this material will be examinable. Please approach this issue, therefore, with as open a mind as possible and remember that all staff take this issue very seriously and you can discuss it with them.

When students move into the 2000-level biology programme and certainly into Honours modules, then a thorough biological training requires experience with both living and dead animal material. Not all modules require this, but many do and if you have any questions or doubts about the modules you would like to take in Biology, then please discuss them with us so that we can provide you with accurate and, hopefully, useful information which will help you to make up your own mind. You might wish to discuss this with your Adviser of Studies at the outset if you feel it may be a significant problem.

Requirements for practical classes

You will need to have the following items for your practical class work in Biology:

- Your A4 lab book, HB and B pencils with sharpener, eraser and ruler
- A set of dissecting instruments, which may be purchased from the online shop and collected from the technical staff when you enrol in the Biology Teaching Lab in first year (and you must buy these unless you already have a complete kit with fine forceps)
- A scientific pocket calculator with simple statistical functionality
- A white lab coat, worn during practical classes to protect your clothing
- Safety glasses – provided at first practical class and you are required to bring these to all subsequent practical classes
- Laptop – some practical classes require the use of a laptop for data analysis/visualisation. There is small number of laptops available for borrowing if you are unable to bring your own.

Health and Safety

The School of Biology takes Health and Safety in practical classes extremely seriously. However, you should always remain cognisant of hazards within the laboratory.

A booklet, containing the Health and Safety Policy of the School of Biology, is available on <https://biology.st-andrews.ac.uk/students/health-and-safety>. It is the duty of the Academic Supervisor/Module Organiser/Laboratory Demonstrator, as well as your own, to ensure that you are aware of its contents, especially in so far as they affect your work activities, and that you work safely at all times. You may obtain a copy of this policy from the Building Safety Coordinator or from the Academic Supervisor/Module Organiser/Laboratory Demonstrator. Appropriate training will be provided in specific areas as required, e.g. radiation hazards or microbiological hazards. The '**Code of Practice for Undergraduate Work in the Laboratory**' can be found below and it is your duty to ensure that you adhere to it at all times.

Make sure that you follow all safety instructions. Always ask if you are in any doubt about the health and safety policy of the school.

The School of Biology reserves the right to ask a student to leave a practical class/laboratory with immediate effect should they fail to follow health and safety advice/information. Please note, this may affect your academic grades.

Laboratory Code of Practice

1. **It is your duty to make sure that you follow the Health and Safety Policy of the School and any Health and Safety instructions given to you by your Academic Supervisor/Laboratory Manager/Laboratory Demonstrator.**
2. You must work safely at all times.
3. You must not commence any work activity until the risks, if any, associated with the work activity have been explained to you.
4. You should be familiar with the contents of the School Health and Safety Policy, especially in so far as they affect your work activity. A copy of the Policy is available in each laboratory of the School.
5. An appropriate risk assessment must have been performed, using the electronic risk assessment management system, for each laboratory procedure in which chemicals or biological agents with a COSHH rating of 3 or more are involved. This will normally be prepared by your Academic Supervisor/Laboratory Manager/Laboratory Demonstrator. You must be aware of the content of the risk assessment, know what type of personal protective equipment to use, and know what to do in the case of an accident.
6. Laboratory coats, of an appropriate type, must be worn at all times.
7. Eating, chewing, drinking, smoking, storage of food, the application of cosmetics and horse-play are forbidden in the laboratory.
8. Mouth pipetting is forbidden.
9. All procedures must be performed so as to keep the production of aerosols to a minimum. Any procedures likely to produce aerosols should be performed in the fume hood.
10. The laboratory must be kept as clean and tidy as is conducive to good working practice.
11. Special arrangements are in place for the use of radio-isotopes and genetically-modified organisms and your Academic Supervisor will discuss these with you before the work activity commences.
12. Waste must be disposed of as described in the School Health and Safety Policy or as instructed by the Laboratory Demonstrator.
13. Accidents, and near accidents that could lead to injury or infection, should be reported immediately to your Academic Supervisor/Laboratory Manager/Laboratory Demonstrator.
14. First Aid Boxes are available in all laboratories in the School of Biology and you should familiarise yourself with their position prior to conducting any practical work.

Always ask if you are in any doubt about the Health and Safety policy of the School.

Fieldwork/work outside the University of St Andrews

All students attending field courses, or whose Honours projects involve fieldwork, or any work taking you outside the University of St Andrews, must have an assessment of the risk associated with the activity carried out before the activity commences. This assessment will be carried out by your Academic Supervisor/Module Organiser in consultation with the School Field Safety Officer on the School 'Risk Assessment of Fieldwork Activities' Form. This risk assessment will be discussed with you before the activity commences.

Ethics (UTREC)

All research in all Schools of the University that involves data collection from (questionnaires etc.), interviews of, interactive investigation of, experimentation upon or demonstrations involving living human subjects, tissues and/or other samples requires formal approval from the University Teaching and Research Ethics Committee (UTREC).

It is University policy that any research involving children under 18 should be reviewed by the UTREC Child Panel and that the researcher should hold an 'Enhanced Disclosure Scotland' (EDS) certificate. The principal supervisor is responsible for ensuring that the student has received the appropriate ethical clearance from UTREC and the Child Panel prior to research commencing.

It is a requirement that any undergraduate Honours or Masters dissertation or PhD thesis that requires ethical approval from UTREC has the letter or email of ethical approval bound into the appendix before submission.

School seminar programmes

The School runs regular seminar programmes, often with distinguished speakers from other universities, research institutes and industry. Subjects cover a wide spectrum of interests, ranging from topics of social concern such as matters of conservation, pollution, biotechnology, bioethics, medical genetics, and population control, to the more specialist interests including up-to-date biological and medical research developments.

All Honours students are expected to attend the seminar series relevant to their degree programme. Pre-Honours students are also encouraged to attend. Details of the seminar series for each semester will be circulated by e-mail, and posted on the noticeboards.

Seminars are a very important means of widening your appreciation and understanding of Biology and of the nature of scientific research.

Student-Staff Consultative Committee

The School President (Ava True, biologypresident@st-andrews.ac.uk) convenes and chairs the Student-Staff Consultative Committee (SSCC), which gives you a chance to give feedback on your modules and degree programmes.

Early in the year, there will be an opportunity to elect your representatives to the SSCC.

Please inform your representatives of any problems that arise or suggestions that you would like to make. The representatives are also required to proactively solicit opinions from a wide range of classmates (not simply their friends), and to present a summary of those views (with numbers attached as appropriate) at the SSCC meetings.

There is normally one SSCC meeting per semester. Please contact your School President for information on dates and representation.

Module evaluation questionnaires

As well as feedback through the SSCC, electronic module evaluation questionnaires (MEQs) will be available via MMS at the end of all your modules. Feedback provided by these helps us to make changes from year to year and so improve the course as much as we can. We would therefore be grateful (as will students in future years) if you would take the time and trouble necessary to fill these in *constructively* and submit them. Matters that arise in the MEQs will be discussed at the subsequent SSCC meeting.

Who can help when things go wrong?

It is much better to let us know about problems as soon as they occur, so that we can give assistance. Problems that are reported after a module is completed are much more difficult to deal with! Please talk to us – we are only too glad to help.

Feel free to talk to any member of staff whom you feel you can approach. But the following avenues are there for you:

Module handbooks

All module handbooks contain a helpful table providing the contact details of relevant staff who you may approach regarding any matter in relation to your studies.

Advice and Support Centre (ASC)

For advice and support on any issue, including academic, financial, international, personal or health matters, or if you are unsure of whom to go to for help, please contact the Advice and Support Centre, 79 North Street, +44 (0)1334 46 2020, theasc@st-andrews.ac.uk, www.st-andrews.ac.uk/ask-a-question.

Director of Teaching and Deputy Director of Teaching

Dr Jacqueline Nairn, Director of Teaching, has overall responsibility for matters affecting your academic performance in the School of Biology and is available to talk about any area of concern that may be affecting your academic studies. 1st/2nd year concerns should be directed initially to Dr Verena Dietrich-Bischoff (Deputy Director of Teaching), whereas 3rd/4th year issues should be directed to Dr Jacqueline Nairn.

Adviser of Studies

All students have an **Adviser of Studies**, whom you will meet at the beginning of each academic year and to whom any learning-related problems may be taken; but you should also feel free to talk to the **Module Organiser** about any issues affecting your performance on particular modules.

Student Welfare Officer

The School of Biology has a Student Welfare Officer, Dr David Shuker (dms14@st-andrews.ac.uk), whom you can contact with any concerns regarding your welfare or academic performance.

Open-door policy

The School of Biology operates an open-door policy, and you should feel free to approach any member of staff with whom you feel comfortable speaking to at any time; please contact the relevant member of staff via email to arrange to meet in person or on Teams. Please be aware, however, that confidentiality remains at the level of the University and not an individual staff member. Staff may raise any matter to the appropriate level of authority should they feel the need to do so. The University's confidentiality code is available on www.st-andrews.ac.uk/study/support/confidentiality

Faculty

You can also take problems significantly affecting your studies, such that Leave of Absence might be required, to the Faculty. **Dr Sharon Leahy, Associate Dean Students (Science)**, (assocdeansci-students@st-andrews.ac.uk) will be able to direct you.

CEED

CEED is the University's central point for assistance with teaching and learning (www.st-andrews.ac.uk/ceed). It aims to encourage excellence and innovation in learning and teaching by providing support and guidance for students and staff. It houses a Mathematics and Statistics Support Centre and many Biology students have used it when they have had difficulties with general numeracy, chemical calculations and statistics.

Special circumstances affecting your academic studies – S-coding

S-coding is the method the University uses to recognise that special circumstances have affected performance in the modules concerned. S-coding may only be applied to Honours or taught postgraduate modules, except for taught postgraduate project or dissertation modules, which are excluded. S-coding may only be applied with the explicit consent of the student and with the approval of the School. The final decision to S-code a module grade rests with the School. You should be aware that a maximum of 25% of the overall Honours credits required or 50% of the taught element of a postgraduate award may be S-coded.

If you feel that most or all of the work of a module has been adversely affected by personal circumstances during your Honours years or during the taught modules of a taught postgraduate programme, you should contact your School in the first instance, indicating the circumstances of the difficulty experienced. This may relate to ongoing illness, close family bereavement or other significant personal difficulties.

You must bring this information to the attention of the School as soon as possible, as there are a number of ways to deal with such situations, with S-coding being the final option. It may be possible (and it is viewed as preferable) to arrange deferred assessments or extended submission dates rather than applying an S-code to the entire module. However, it should be noted that if such arrangements are made (extensions or deferred assessments etc.) it is unlikely that you will be entitled to have the module S-coded as well

For more information on S-coding see:

www.st-andrews.ac.uk/students/academic/academic-advising/glossary/s-coding

Academic alerts

Academic alerts are a way of helping students who are having trouble coping with their studies, such as missing deadlines for handing in work, or missing compulsory classes. The aim of the alert system is to help students by flagging up problems before they seriously affect students' grades. Academic alerts will be issued by email from a member of staff within the School and will tell students what is wrong and what they are required to do (e.g. attend classes in future). The alerts will also tell students what support the University can offer. If students do not take the action required, they will get another alert, and eventually will automatically get a grade of zero (0X) and will fail that module. The system is designed to help and support students in order to remedy any problems or issues before these lead to failing a module. Alerts will never appear on a student's permanent transcript. For more information on academic alerts and details on how the categories work, see www.st-andrews.ac.uk/policy/academic-policies-student-progression-academic-alerts/academic-alerts.pdf.

Guidance for students is available at www.st-andrews.ac.uk/students/academic/academic-advising/glossary/academic-alert.

To clarify, within the School of Biology:

Absence, without good reason, from compulsory components of the class (all practical classes, all tutorials and any other scheduled classes noted as compulsory in the Module Handbook) will result in the issuing of an academic alert. Within the School of Biology, **three** such absences **will** result in you receiving 0X for the module. Further, all coursework associated with a class must be completed and submitted by its due date. Late submission, without good reason, will incur a fixed mark/grade penalty, which will increase each day that the work remains overdue. Non-submission of coursework (coursework overdue by more than

14 working days), or submission of coursework of unacceptable standard, will also be considered to be grounds for issuing an academic alert.

Termination of studies on academic grounds – Undergraduates

If your academic performance is unsatisfactory, i.e. you have gained insufficient credits to progress to the next stage of your degree programme or breached conditions of your probation, your studies may be terminated. You will then be notified by the Associate Dean Students (Science) that your studies are terminated and you will have five working days to appeal this decision using the appropriate form. This should be supported by documentary evidence specifying the reasons for your unsatisfactory performance. If you do not submit an appeal, you will have your studies automatically terminated in accordance with Senate Regulations. Your full student record is taken into account in any review, including any instances of non-academic misconduct, during the Termination of Studies Cross-Faculty Board; however, in first instance, only your credits attained in a relevant number of semesters are taken into account. For more information, please see: www.st-andrews.ac.uk/students/rules/ugsenateregulations – termination of studies is covered by items 45 and 46; and: www.st-andrews.ac.uk/policy/university-governance-academic-appeals/student-academic-appeals.pdf.

If the appeal is successful, the Associate Dean will contact you with conditions for your return to studies. If you do not meet these conditions (e.g. you do not pass the specified amount of credits within the time period given by the Associate Dean), your studies may be terminated again.

If your appeal is unsuccessful, you may have a further right of appeal to the Senate of the University. Appeals to Senate are admissible only on limited grounds and the process cannot be used to challenge matters of academic judgment. To make a Senate submission, you must complete and submit to the Senate Office a Stage 2 appeal form within 10 working days of the date stated on your termination letter. Late submissions may not be considered further by the University. For further information, see the University's Policy on Student Academic Appeals at www.st-andrews.ac.uk/policy/university-governance-academic-appeals/student-academic-appeals.pdf.

International students here at St Andrews on a Tier 4 visa should be aware that any terminations will be reported to the UKVI and their visa curtailed.

Contact for personal issues, or any other student matters impacting your studies:

Student Services, The ASC, 79 North Street, KY16 9AL

University phone: +44 (0)1334 46 2020

Email: theasc@st-andrews.ac.uk

Academic intervention

The University operates an academic intervention process at an overall degree programme level. The principle is to help students recognise when their academic progress may be at risk, at a sufficiently early stage that they have opportunities to take action to address any underlying problems. Risks to studies include module results below those consistent with satisfactory academic progress; failure to progress on a student's degree programme of choice, and in the most severe cases, termination of studies.

The academic intervention process involves issuing a student at risk with a series of warnings of increasing severity (see www.st-andrews.ac.uk/policy/academic-policies-student-progression-early-academic-intervention/early-academic-intervention.pdf).

Leave of Absence (LOA)

Occasionally it becomes necessary for students to take a period of absence from their studies before returning to continue their studies. This may be due to personal circumstances, medical requirements or other reasons. Details of Leave of Absence are on www.st-andrews.ac.uk/students/academic/academic-advising/glossary/leave-of-absence.

Withdrawal from studies

If you are considering withdrawing from your studies at the University, you should discuss the matter with Student Services in the first instance. You should arrange to do this as early as possible, as there are often alternative options open to you that would not require the final step of permanent withdrawal from the University. If you do decide you wish to withdraw from your studies, you must contact your Registry Support Officer, who will be able to offer guidance on your options and who will ensure that the process is completed correctly. You should be aware that there are fee implications, as well as implications to your leave to remain in the UK if you are an overseas student, when you withdraw from your studies part of the way through an academic year. You should therefore ensure you contact the Money Adviser and the International Adviser in Student Services to obtain early advice on the final implications of your

decision before you complete your withdrawal. Further information is available at: www.st-andrews.ac.uk/policy/Academic-policies-Student-progression-leave-of-absence-re-engagement-and-withdrawal/leave-of-absence.pdf

Academic appeals and complaints

The University is committed to ensuring as high a quality student experience as possible while studying at St Andrews. Occasionally things may go wrong, and if you are experiencing a difficulty or are dissatisfied with your academic experience, you should raise concerns as soon as possible, through the appropriate process (see www.st-andrews.ac.uk/education/handbook/academic-appeals-and-complaints).

- **An appeal requesting a formal review of an academic decision** – where, for example, the University has made a judgement about your assessed work or progression within a course of study which you have grounds to query (see www.st-andrews.ac.uk/students/rules/appeals/policy).
- **A complaint** – where you are dissatisfied with the quality or standard of service that you have received from any part of the University, either academic or non-academic (see www.st-andrews.ac.uk/terms/complaints). If there are extenuating personal circumstances that may affect your academic performance or impact on your progression, you must bring these to the attention of an appropriate member of staff (for example your Adviser of Studies, Module Coordinator or the appropriate Associate Dean) as soon as possible and normally prior to completing any assessment. If you base a subsequent academic appeal on such extenuating personal circumstances, you will be required to provide valid reasons to explain why you failed to notify the examiners or other relevant persons of these circumstances prior to completing the assessment.

Using the right procedure

If you are unsure whether to use the appeals procedure or the complaints procedure, there is a key question to ask yourself. What kind of outcome are you seeking?

If you are seeking to have an academic decision changed (such as a mark or grade, a decision about progression, or termination of studies), then you **must** use the appeals procedure. The permissible grounds for submitting an appeal are clearly detailed therein.

If you are dissatisfied with the level of service you have received from the University, or if you believe that a service needs to be improved, or that the University has failed (for example) to

follow one of its administrative processes properly, then the complaints procedure is normally more appropriate.

For matters involving teaching in general, there are also feedback opportunities through the Student-Staff Consultative Committee, module evaluation questionnaires and School Presidents.

You can make both a personal complaint and an appeal by using both the appeal and complaints procedures, but it must be emphasised that changing an academic judgment or decision is not one of the outcomes from the complaints procedure used alone.

Further guidance and support

The Students' Association provides independent and confidential help and advice for students who are contemplating submitting an academic appeal, complaint or are having discipline proceedings taken against them. The Students' Association employs Iain Cupples, the Student Advocate (Education), whose job it is to ensure that you receive help with writing and submitting a submission. Iain can also accompany you to any hearing. He should be your first point of contact as soon as you feel you need help (www.yourunion.net/support/education/#contact). There is also a useful guide to appeals (www.yourunion.net/support/education/#appeals) published by the Students' Association.

Additional information:

Concerns:

<https://reportandsupport.st-andrews.ac.uk/>

Complaints:

www.st-andrews.ac.uk/terms/complaints

www.st-andrews.ac.uk/assets/university/terms-and-conditions/documents/complaints/complains-handling-procedure-guidance.pdf

www.st-andrews.ac.uk/media/principals-office/documents/chp-students-guide.pdf

Appeals:

www.st-andrews.ac.uk/students/rules/appeals/policy

Student fees

Graduating in person or in absentia marks the end of your degree or diploma course of studies at the University of St Andrews. If you have been accepted onto a new degree or diploma programme at the University, the new programme is separate and distinct from the course of

studies from which you are about to graduate, and you will be liable for all fees associated with that new programme.

Disability support

If you require support for disability reasons, for example particular teaching and exam arrangements, please contact the Disability Team in Student Services who can provide support for a wide range of disabilities, such as learning difficulties, visual and hearing impairments, mobility difficulties, Asperger's, mental health, long-standing medical condition and much more (www.st-andrews.ac.uk/students/advice/disabilities).

In the School of Biology, Dr Fran der Weduwen is the Disability Coordinator.

Opportunities outside semester time

Careers, internships and work experience

During your degree you must give serious thought to the career that you intend to follow after you graduate. You should consult members of staff about this, and your Degree Controller and (in due course) Senior Honours project supervisor will usually be those best able to advise you in the first instance. We cannot stress too strongly the wisdom of considering a variety of options, and of consulting the University's Careers Centre at an early stage.

The Careers Centre is a University organisation with two main functions: to provide students with information and advice about the range of careers open to them; and to help them find a suitable starting point at the conclusion of their course by providing detailed information about employers and jobs, about further study, and about training establishments and courses. It is staffed by full-time advisers who are available for consultation throughout the year at 6 St Mary's Place.

Inevitably, the main resources of the Centre are devoted to those approaching the end of their studies, but it must be emphasised that the Centre is open to all students. For most students, the final year is a very busy one, and the Centre as a matter of policy, encourages students to register early in their studies in order to ease as much as possible the amount of time spent in the final year on careers research. You are always welcome, with or without formal registration, to use the available facilities, e.g. to attend information sessions and workshops, to investigate vacation and sponsorship opportunities and, most of all perhaps, to consult in

the reference libraries the extensive collection of literature on employment and training in many fields.

During the year, and especially after Christmas, the School receives information about postgraduate courses, PhD places and job opportunities in the general field of biology. We will endeavour to circulate these to you electronically in a weekly update.

When you apply for jobs or postgraduate positions, you will often be asked to nominate academic referees. Your Degree Controller, 2nd and 3rd year Biology tutorial tutor and project supervisor will, in most cases, be the most obvious people to ask to act as referees for you. If you do ask them, or any other staff member, to prepare a reference, it is a good idea to give them your *curriculum vitae* to ensure that they are aware of all your activities and can write as well-informed a reference as possible. It is also a good idea to provide them with information relating to the posts for which you are applying, so that they are able to provide a more informed assessment of your suitability, including the format of the reference and when it is due.

The person at the Careers Service who currently looks after Science students is Dr Joshua Crofts, so he is an ideal person to meet with you if you have questions. You can contact him at: jjc@st-andrews.ac.uk.

Vacation studentships

The Wellcome Trust, Carnegie Trust and Royal Society of Biology support students for periods of laboratory work in the summer vacation (www.rsb.org.uk/careers-and-cpd/careers/studentships-placements). Information on these studentships will be posted in the School student newsletter. The Careers Centre may also be able to help with advice on summer scholarships but ask them well in advance, as some of the deadlines are very early in the year.

Laidlaw Undergraduate Internship Programme

The Laidlaw Undergraduate Internship Programme in Research and Leadership is sponsored by a generous donation from The Rt Hon Lord Laidlaw of Rothiemay, an honorary graduate of the University. This exciting programme equips students with the skills and values to become leaders in their chosen occupations beyond University.

Interns will design, pursue and report on a research question of their own devising, working on this research with an academic in their chosen School. Importantly, interns will also complete intensive, bespoke leadership training sessions.

This programme is open to undergraduate students in their penultimate year of study. Please see the Laidlaw website for more information at: <https://laidlaw.wp.st-andrews.ac.uk>

St Andrews Research Internship Scheme (StARIS)

This programme was introduced to promote projects that emphasise the many ways in which Research and Teaching can come together and to give undergraduate students the opportunity to gain experience doing independent research. StARIS is open to any undergraduate student matriculated at the University of St Andrews. StARIS funding (currently at £54 per 6 hours of work, up to £2,000 per School) cannot be used to support research for a credit-bearing programme. For full details of the application process visit: www.st-andrews.ac.uk/students/academic/internships/staris

Advertisements posted in School of Biology buildings

From time to time, posters advertising a variety of summer schools, fieldwork centres, charity-based research projects, ecotourism organisations and other similar activities may be posted on notice boards (usually by interested students). These seek to encourage your involvement during vacation periods. You will also find notices advertising post-graduate programmes at a variety of institutions and also advertisements for jobs available to you after graduation. Any information which comes into the School of Biology regarding possible placements or internships will be circulated in a regular e-mail.

Please note, unless specifically stated, the School and the University may not take any responsibility for your engagement in these activities. They are not recognised components of your degree programme and are not regulated in any way by the University. You may not be insured by the University when participating in these schemes and must ensure that you arrange your own travel and personal insurance for such activities outwith your degree programme. If you are considering pursuing any of these opportunities, but have any concerns relating to it, you are encouraged to discuss these informally with staff.

A comprehensive list of possible UG summer vacation scholarship is available on:

www.rsb.org.uk/careers-and-cpd/careers/studentships-placements.

Guidelines for preparation and presentation of essays

Doing your research first

- i) You may be provided with some references on your essay topics. More may be found in the reference lists at the end of the recommended papers, or by consulting the web-based systems in the Library. Although textbooks may be a useful source of background material, they are not usually sufficiently advanced or up to date to provide you with all of the information that you need for an Honours-level essay. You should now be reading scientific papers (in the Periodicals section of the library) and review articles as your primary source material.
- ii) Don't get carried away. While we do expect you to read the original literature at this level, your topic may be one on which whole books have been written. You must be selective and try to strike a good balance between providing an overview and getting into detail on relevant points.
- iii) Make careful notes, including specific examples and numerical facts. These notes should be good enough to become part of your course and revision material, and will underpin your essay. Be aware of good academic practice when making your notes and never copy-paste information from your sources.
- iv) A lot of information is available on the internet. This can be useful but, while we encourage you to access this information, you must be aware of its limitations. Whereas scientific literature that is published in reputable journals is subject to peer review and verification by acknowledged experts in the field, this is not the case for the vast majority of information on webpages, which is often of very poor quality and may be completely wrong. You must also be very careful **not** to just copy material from the web – this is plagiarism for which the penalties could be severe.

Making a plan of your answer to the question

- i) Understand the question fully. Do not twist it to suit yourself, or just see one possible angle and miss others. See how it allows/requires you to link together different ideas, from different parts of the course or beyond it. Think about the meaning of 'Compare and contrast A and B', or 'Assess...' or 'Discuss...', and then do it – each is quite different from being asked just to 'Describe'.
- ii) Write down the main issues and work out the links between them to give a proper plan. This plan should be evident to the reader, but does **not** need to be given explicitly, let alone spelt out in the introduction and then again at the end.
- iii) Be different and controversial only if you can justify it; but **do** try to be critical.

Using your notes to assemble a coherent essay around the plan

- i) By this stage, you should not need the books and papers at all. Do not sit with a reference propped up beside you while you write the essay itself.
- ii) What we want from you is a clear and concise summary of the important points and the main work in the area, while following any specific guidelines that have been given. The work must be your own account, not a thinly veiled précis of a standard review or text.
- iii) Don't try to cram everything in, but do use sub-headings, diagrams and tables listing important points if these seem appropriate. If you are in any doubt about what is required of you, do consult the person who set the essay.
- iv) **never** copy chunks from books, or even regurgitate the same sequences of ideas and facts from them. This is **plagiarism – see academic misconduct**. It is equally important that you do **not** copy essays or practical write-ups from each other or from past students; and you must not copy out material from research papers without acknowledging its source.
- v) Acknowledge your sources of information. Do this by citing the relevant references in the text and then listing them in the reference section at the end of your essay, as explained below. Direct quotes are uncommon in the sciences, so use your own words (unless you have a good reason for directly quoting someone else).

Content

- i) Aim to integrate and to analyse ideas and facts into a coherent and interesting and well-balanced whole that is easy to read and understand.
- ii) Make sure the text proceeds logically through the arguments.
(NB: These two points are really the core of essay writing and underline its value – they are exactly the skills you will need in most jobs.)
- iii) Use good punctuation (get advice if you have problems) and proper paragraphs.
- iv) Avoid silly humour and being whacky just for the sake of it, although we will usually enjoy reading a little bit of light relief.
- v) In general, use formal unemotional scientific language; don't be wordy or prosy just for the sake of it and avoid slang. Poor scientific writing can appear somewhat stilted, but good scientific writing with short clear non-sloppy sentences is a prose that 'flows' easily and conveys information concisely. See later for detailed points.
- vi) A good way of improving your writing is to read well-written articles. You will gradually learn how to write well if you read well.

Presentation

- i) Word-processed – to allow you to reorganise and reassemble ideas; also you can correct, alter spellings, count words, etc., very easily. You can use italics (for genus and species only, NOT for other taxonomic ranks). No mistakes should get through the system – you should produce a professional piece of work of which you can be proud.
- ii) Unless stated otherwise in the essay guidelines, please use 1.5 line spacing and leave reasonable margins to improve readability.

Length and depth of essays

- i) The length of the essay may be specified – e.g. 2000 words, or 6 pages. Stick to it (note section on word limits above).
- ii) Do not produce screeds of irrelevance, and do not get the content unbalanced.

Specific points to note (arising from previous essays)

- **Be careful with Latin/Greek endings and plurals.** Notably, '**data**' is a plural word ('These data are', not 'This data is') – the singular is 'datum'. '**criteria**' is also a plural – the singular is 'criterion'.
- Use italics for all genus and species names, but not for higher taxonomic ranks; and only abbreviate the genus names to a single letter (as seen in many scientific papers) after you have already given it in full at least once, e.g. '*Lumbricus terrestris* (Annelida)', and then later on '*L. terrestris*'.
- **Avoid sloppy expressions:** 'roughly, fairly, around, about' – usually better to use 'approximately' (but avoid too much repetition of any one word). 'Significant' has a precise scientific meaning and should not be used just to mean interesting or important.
- **Contractions:** 'don't, won't, can't' – write these out in full. Also 'lab' should always be laboratory. NB 'it's' is only *ever* correct when short for 'it is', and you will not be using these contractions of word pairs - so avoid 'it's' altogether!
- **Avoid prosy expressions** such as 'in order to...' – wordy for the sake of it; 'to...' means exactly the same. 'It is interesting to note that...' (And usually what follows is *not* very interesting!) 'Let us consider...'
- **Usually, avoid 'first person' and stick to 'third person':** 'We might expect that...' – stick to the third person, try 'It might be expected that...' Instead of 'When we take a close look at...', try 'On closer examination...'

- **Beware of the use of 'like'** – replace with 'such as' or 'as with' according to context. Beware of the use of 'actual' and 'actually' – often used carelessly. Beware of the difference between 'repetition' and 'replication'. Beware of the spelling of 'there' and 'their' – elementary school stuff.
- **Abbreviations** should be given in full when the word is first mentioned with the abbreviation in parentheses after it. If there are a lot of abbreviations, consider adding an abbreviations list.

References

When you are preparing or writing a piece of work, you are likely to consult various sources, ranging from textbooks to scientific papers to the internet. Some of the information you come across will be 'general knowledge', while other information will be more specific, novel and detailed.

It is important that you know how to reference the latter appropriately, so that you can give credit where credit is due, avoid issues of plagiarism and allow the interested reader to pursue the topic in more detail.

Within the School of Biology, the preferred method of citing (making reference to) a piece of work is the **Harvard system**. Below is a short summary of this system. If you require more details, then there are several websites that expand on the various permutations.

General rules for citing

1) Cite the reference in the body of the text where you first present the information

Examples of the preferred method of citing are shown below:

Either: 'A recent report by Smith *et al.* (2003) has shown that chocolate has a positive effect on mood.'

Or: 'The consumption of four cups of coffee a day has been shown to cause an increase in resting pulse rate (Brown *et al.*, 1995).'

Note that '*et al.*' is used if the number of authors is > 3. Thus, if it is a single author, then simply write Brown (1995), if 2 authors then Brown and Smith (1997), if 3 authors, then Brown, Smith and Johnson (1999). Any more than that, and you simply write the first author and then '*et al.*'. If you cite two or more articles by the same author(s) published in the same year, use letters to distinguish them ('Angus is wet in summer (Brown, 1997a) but Fife is wetter (Brown, 1997b)').

Cite website sources in a similar manner, with author and date if known. Problems arise with internet sources as it is not always possible to ascertain authorship or the date of writing. If this is the case, then use the name of the organisation or some other identifier. Quote the date when you accessed the website, because websites can change over time (this is one of the reasons why publications are usually preferable to websites as references). Do **not** include the URL within the body of text. The URL and the title of the page are to be listed in the reference list/bibliography (see below).

If you are quoting from the source material **directly** and the quote is less than about 40 words in total, then use quotation marks around that part of the text. If the quote is more than 40 words in length, then indent the phrase so that it is set apart from the main body of text. When quoting directly, also give the page number in addition to the author and year information. In general, however, it is neither advisable nor appropriate to use long direct quotes in scientific writing (unless you want to make a point about the specific wording); rewrite the material in your own words and reference as above.

2) Cite only those sources you have actually read

As a general rule, do not make reference to articles you have not read. However sometimes, it is not possible to obtain or read the original article that contains the relevant information. In this situation, you then cite both the original article and the source where you came across it, e.g. '(Cajal, 1924, cited in Bruisner *et al.*, 2003)'. In your reference list/bibliography include the details of both sources.

3) List the references at the end of the text

At the end of your piece of work list the references in alphabetical order according to the surname of the first author (see the note below on bibliography vs reference list). If you have cited several articles by the same author, then list the articles chronologically.

4) Bibliography vs Reference list

These two terms are not, as is commonly thought, interchangeable. However, there are conflicting ideas about what each should include. Please note that within the School of Biology the following definitions apply:

A reference list is a list of all the source material you have directly cited within the body of text. A bibliography, on the other hand, is a list of the articles you have read and consulted but which you have **not cited** within the text. In textbooks, this list would often be headed

'Background Reading'. Depending on the type of exercise you undertake, you should give either a reference list, or a bibliography, or both.

Finally – check every sentence, every spelling, and every bit of punctuation before you hand in the work. When submitting a Word-processed essay there is no excuse for having numerous spelling mistakes. **Notice** that a spell-check programme alone will not find all errors – if you have produced another 'real word', a slip may not register as a spelling error.

Assessment criteria

Pre-Honours essay marking descriptors

Please note that these descriptors should be used against what is expected of a student at their level.

Mark	Criteria
17-20	<p>Excellence: Work characterised by</p> <ul style="list-style-type: none"> Original thought and reflection Critical awareness and analytical ability Use of wider reading or links with other modules/wider curriculum beyond that recommended <p><i>Evidence of the criteria below along with anything above – 19-20:</i></p> <ul style="list-style-type: none"> Excellent use of data and examples Strong structural organisation Flair in presentation Well-balanced arguments Thorough understanding of the topic/assessment task
14-16	<p>Merit: Work characterised by</p> <ul style="list-style-type: none"> Solid knowledge and use of literature Signs of analytical ability Clear evidence of reading within module material Logical organisation and consistent relevance Well-chosen use of examples and data Fluent presentation Well-structured arguments Some excellent work, but not fully developed Solid understanding of the topic/assessment task
12, 13	<p>Satisfactory: Work characterised by</p> <ul style="list-style-type: none"> Tendency to be descriptive Some evidence of reading within module material Some use of examples and data Coherently structured and presented Evidence of argument Some good-quality work Reasonable understanding of the topic/assessment task
7-11	<p>Pass: Work characterised by</p> <ul style="list-style-type: none"> Predominately descriptive Some errors of fact or interpretation Very little evidence of reading module material Limited use of examples and data Some weaknesses in structure and presentation Weakly developed arguments Limited understanding of the topic/assessment task
5, 6	<p>Marginal Fail: Work characterised by</p> <ul style="list-style-type: none"> Descriptive work Many errors of fact or interpretation Minimal of reading module material Weak structure and presentation

	Weakly argued Little relevant illustrative material Poor understanding of the topic/assessment task
0-4	Poor Fail: Work characterised by Very poor structure and presentation No evidence of reading module material Often too short No clear argument May be unfinished, in note form, or partial answer Inadequate understanding of the topic

Honours essay marking descriptors

Please note that these descriptors should be used against what is expected of a student at their level.

Allowed marks	Descriptor
1st class	Very good to excellent Honours standard
19, 20	As 17-18, except there is additional clear evidence that the student has valuable originality in perspective or exceptional depth of understanding, and/or has integrated appropriate material in addition to that presented by the question setter in the taught module.
17, 18	A very good understanding of the major issues, with a clear, well-informed and well-structured contextual framework and argument around the topic. There is an appropriate mix of theory and evidence.
Upper 2nd class	Good Honours standard
14, 15, 16	The answer displays a good understanding of the main relevant issues. There are no major conceptual errors on key issues, but there may be minor errors. The essay is generally well written and comprehensible.
Lower 2nd class	Adequate Honours standard
11, 12, 13	The answer shows an understanding of the key issues and has a suitable contextual framework, but without great depth. The arguments are weakly articulated.
3rd class	Minimal Honours standard
9, 10	Most of the key issues are addressed correctly but superficially, and without showing real understanding. Some relevant evidence and/or factual information. Poorly organized and lacking a contextual framework.
Pass, Ordinary	Not Honours standard
7	Many of the key issues are addressed, but either very superficially or with important errors and/or omissions. Little relevant evidence and few facts. Brief, or unnecessarily padded and/or very poorly organised.
FAIL	Unacceptable performance: NOT CREDITWORTHY
5	Some key issues are addressed correctly, albeit superficially, but others have serious conceptual errors or are missing. Little relevant evidence and few correct facts.
3	Some relevant information is presented, but the key issues of the topic either are largely wrong or missing. Extremely superficial throughout. Little or no relevant evidence and few correct facts.
1	Contains a small amount of biological or informational content, but either irrelevant, wrong, or trivial.
0	No biological content at all.

Treatment of irrelevant material in Pre-Honours and Honours essays

Markers must carefully consider whether unexpected material is indeed irrelevant, and students should be given the benefit of any reasonable doubt.

Where material is clearly irrelevant, the following guidelines apply.

Where irrelevant material occurs within an answer which is generally on topic, it should be ignored.

Where the whole answer appears to be a response to a question that was not asked:

If the answer is biological, but not in any way related to the actual question, grade 1 will be awarded.

If the answer is award related to the topic of the question but clearly NOT on the actual topic, it will be marked according to the quality of the material presented, using the following guidelines:

An excellent essay: grade 11

A good essay: grade 9

An adequate essay: grade 7

A poor essay: grade 3

The purpose of these guidelines is to help ensure consistency of treatment when students present irrelevant material.

Practical report assessment criteria

Please note, some practical reports only require some of the sections detailed below, while others may require additional information. Please check the requirements for each practical report and the weighting of each section. In year 3 and year 4, there will be greater focus on assessing evidence of breadth and depth of reading and understanding.

Section	6 or less	7-10	11-13	14-16	17-20
Abstract	Absent.	Omits important points, unclear and includes much irrelevant material.	Summarises the aims and key findings of the report but includes some irrelevant material and could be more concise.	A good abstract, which is clear and concise but may fall short on presentation of findings, approach/techniques, or significance of the results.	Aims and findings are clear and concise. Succinct account of approach/techniques. Significance of results wrt knowledge to date is made clear.
Introduction	Aims of the work are not clear. Poor range of references and/or review of references is weak. No meaningful hypotheses are given.	Aims of the work are not clear. Not all references are relevant and some key peer-reviewed references missing. Hypotheses are not appropriate and/or unclear.	Aims of the work are clear. Good review of references sourced but review of peer-reviewed references falls short on presentation. Hypotheses are presented but lack clarity.	Aims of the work are clear. Very good review of relevant background peer-reviewed references. Hypotheses are clear and appropriate.	Aims of the work are clear. Excellent and concise review of relevant background peer-reviewed references. Hypotheses are clear, unambiguous and appropriate.
Materials and methods	Section either missing or completely inadequate.	Insufficient information provided to enable replication of the experiments.	Describes well most aspects of the experimental methods and analysis procedures but a number of minor errors or omissions. Standard methods referenced appropriately.	Fully describes all aspects of the experimental methods and analysis procedures, but a few minor errors. Standard methods referenced appropriately.	Fully describes all aspects of the experimental methods and analysis procedures. Clear and concise, sufficient for replication, no omissions or errors. Standard methods referenced appropriately.
Results	Results section is incomplete. Evidence of lack of understanding. Lacks text to describe observations.	Results section is mostly incomplete or incorrect. Evidence of lapses in analysis. Calculations may have some errors. Text included which fails to describe observations accurately.	Data manipulated appropriately but evidence of lapses in analysis. Calculations may have some errors. Includes mostly relevant text to describe observations.	Data manipulated well. Calculations correct. Data handled well. Accurate text included to describe observations.	Data manipulated very well. Calculations correct. Evidence of original/innovative data handling. Concise and accurate text included to describe observations.
Figures and tables	Very unsatisfactory presentation with omissions in figures and tables, significant errors in captions and equations. Inappropriate choice of presentation of results.	Less than adequate presentation of figures, tables, equations and graphs with errors and omissions (captions). Numerical data/theory poorly presented with many errors.	Good results, fairly well presented with figures, tables, equations and graphs, but with some errors and lack of clarity (e.g. captions, axes labels). Numerical data presented but not readily accessible.	High quality results, well presented with clear figures, tables, equations and graphs. Carefully presented numerical data.	Exceptional quality results, carefully presented with very clear figures, tables, equations and graphs. Carefully presented numerical data in a readily accessible way.
Discussion	Interpretation of the results flawed. Few or no references to appropriate peer-reviewed publications. Poor organisation. Evidence of minimal effort.	Little discussion and interpretation of the results and their significance. Lacks evidence of relevant further reading. Poor organisation. Very weak conclusions.	Clear discussion but may lack scope, conciseness and/or relevance. Evidence of limited further reading. Attempts to interpret results and their significance, though with some misunderstandings. May contain some inappropriate conclusions, which lack supporting evidence.	Complete and mostly clear discussion. Evidence of further reading of relevant material. Data placed in context with appropriate peer-reviewed references. Appropriate conclusion but not fully supported.	Clear, complete and concise. Evidence of extensive further reading of relevant material. Data placed in context with appropriate peer-reviewed references. Appropriate conclusions with supporting evidence.

Structure	Report is very poorly structured throughout, causing considerable confusion to the reader.	Report exhibits a poor structure, with one or more sections treated too briefly.	Report is generally well structured but sometimes loses flow or structure.	Report is well structured with a logical flow.	Report is outstandingly clear with a flawless structure.
Writing	Standard of writing that requires considerable effort by the reader to understand the report. Extensive formatting, spelling and grammatical errors.	Standard of writing that requires work by the reader to understand the report. Formatting, spelling and grammatical errors significantly detract from the readability.	Lacks conciseness and clarity. Some formatting, spelling and grammatical errors.	Clear and concise. Well organised. Good writing, largely free from formatting, spelling and grammatical errors.	Very clear and concise. Very well organised. Excellent writing, completely free from formatting, spelling and grammatical errors.
References*	Incorrect or inconsistent format.	Mostly incorrect or inconsistent format.	Mostly correct and consistent format.	Correct and consistent format.	Consistently adheres to correct format.

Laboratory notebook assessment criteria

Please note, some lab notebooks may not be assessed on all of the sections detailed below, and some lab notebooks may require additional information. Please check the requirements for each lab notebook and the weighting of each section.

	<10	11-13	14-16	17-20
Index	No index or poor index	Reasonable index with a number of lapses	Good index with only occasional lapses	Excellent, clear index
Dates and titles	Poor recording of dates. Titles either not provided or not relevant	Reasonable recording of dates with number of lapses. Reasonable titles provided throughout notebook	Good recording of dates with occasional lapses. Good title descriptors provided throughout notebook	Accurate and consistent recording of dates. Excellent title descriptors provided throughout notebook
Experimental rationale	Rationale either not provided or difficult to follow or not relevant	Rationale provided for every experiment but falls short on clarity	Rationale provided for every experiment. Mostly clear and easy to follow	Rationale for every experiment set out in a very clear, concise and easy to follow manner
Experimental methods	Weak description of experimental methods. Difficult to follow or inaccurate	Reasonable description of experimental methods but falls short on clarity in some areas	Good, mostly clear and complete description of experimental methods	Excellent unambiguous and complete description of experimental methods
Recording of raw data in lab notebook, or field book for field-based studies	Weak with gaps/inaccuracies in raw data sets and control/calibration data, difficult to follow, units unclear. Possible errors but not identified as such. Impossible to audit and reach independent conclusions	Mostly good with a few lapses in accuracy/detail for all raw data including control/calibration data. Mostly correct units throughout. Errors identified as such. Mostly easy to audit and to reach independent conclusion	Good with only occasional lapses in accuracy/detail for all raw data including control/calibration data. Correct units throughout. Errors clearly identified as such. Easy to audit and to reach an independent conclusion	Excellent evidenced by accuracy and detail provided for all raw data, including control/calibration data. Correct units throughout. Errors clearly identified as such. Very easy to audit and reach independent conclusion
Data accurately transferred from field book to lab notebook (for field-based studies only)	Weak. A number of lapses in accuracy/clarity of data transfer	Mostly good with a few lapses in accuracy/clarity of data transfer	Very good with only occasional ambiguity	Excellent with no ambiguity

Group recording of raw data in field based studies	Weak with a number of lapses in the following: terminology, standardisation of data sheets, standardisation of data collection, cross-referencing, data signed	Mostly good with a few lapses in the following: terminology, standardisation of data sheets, standardisation of data collection, cross-referencing, data signed	Very good with occasional lapses in the following: terminology, standardisation of data sheets, standardisation of data collection, cross-referencing, data signed	Excellent. Consistency in the following: terminology, standardisation of data sheets, standardisation of data collection, cross-referencing, data signed
Data presentation	Poor presentation of data. Either presented in an inappropriate or incorrect manner	Mostly good presentation of data with a number of lapses	Good presentation of data with occasional lapses	Excellent, appropriate presentation of all data
Data manipulation/calculations	Weak data manipulation/calculations evidenced by consistent misunderstandings/errors	Mostly good data manipulation using mostly appropriate approaches/calculations	Good data manipulation using standard approaches/calculations	Excellent, perhaps novel, but consistently appropriate data manipulation/calculations
Summaries and ideas	Either no summaries/ideas recorded or weak interpretation of data. May consistently over-interpret or fail to interpret most of the data	Mostly good interpretation of data. Falls short by over-interpretation or failure to assign importance to all data. Mostly good suggestions arising from data	Good, careful interpretation of data. Good suggestions following on from good interpretation	Excellent, concise, thoughtful interpretation of data. Thoughts arising from data suggest an excellent understanding

Research proposal assessment criteria

Please note, some research proposal assessments only require some of the sections detailed below.

Please check the requirements for each assessment and the weighting for each section.

	<10	11-13	14-16	17-20
Importance of problem	Of little importance. Fails to meet funding body aims. No impact.	Possibly important. On periphery of funding body aims. Limited impact.	Important and meets current funding body aims. Impact possible.	Very important. Fits current funding body aims. Potentially high impact.
Background	Poor range of references. Many key references missing.	Good range of references. Some important references/topics missing.	Very good range of peer-reviewed references.	Extensive, relevant, up-to-date range of peer-reviewed references.
Structure/Style	Poor structure/style. Fails to communicate key points clearly.	Structure/style mostly appropriate. Not all key points presented clearly.	Very good structure/style. Written such that most key points are clear.	Excellent structure/style. Written such that all key points are clear and engaging.
Programme of work	Programme of work unclear/poorly considered. Unachievable.	Programme of work could be clearer. Some aspects not considered fully. Problems/solutions not identified.	Good programme of work. Approach/strategy well thought through. Some potential problems/solutions considered.	Ambitious but well planned. Achievable.
Appropriateness of staff/equip/costs	Unrealistic costings. Not all aspects considered.	Some costs considered appropriately. Other costs not realistic with aims/budget difficult to achieve.	Carefully costed, some aspects overlooked, which may compromise aims/budget.	Very carefully costed. Kept to realistic minimum without compromising aims.
Overall rating of scientific merit	Poorly considered experiments and outcomes. Will not contribute to this area of science.	A good application. Some weaknesses in experimental planning and possible outcomes. Potential to add to this area but needs work.	Outcomes and experiments are very good & worth pursuing. Results will add to this area of science.	Planned experiments and outcomes excellent. Will take this area of science beyond current limits.
Adhering to presentation guidelines	Ignores guidelines.	A number of deviations from the guidelines.	Adheres to guidelines in most of submission.	Adheres to guidelines throughout.

Oral presentation assessment criteria

Please note, some oral presentation assessments may not be assessed on all of the sections detailed below.

In years 3, 4 & 5, there will be greater focus on assessing evidence of breadth and depth of reading and understanding.

	<10	11-13	14-16	17-20
Delivery	Read the talk	Extensive use of notes throughout delivery	Very good. Delivered with occasional use of notes	Excellent. Delivered with confidence and entirely without use of notes
Structure	Poorly structured and very difficult to follow throughout entire presentation	Mostly well structured, however, some of the content was unclear	Well-structured with only odd passages less easy to follow	Very well-structured, easy to follow entire presentation
Citations	A weak selection of references. Limited range or irrelevant to topic	A satisfactory range of references. Mostly relevant review sources with little or no primary source material	A very good range of references. Good choice of review sources and some primary source material	Excellent range of relevant, up to date references, including primary source material
Timing	Significant difficulty with timing. Less than 50% of time filled or 50% over time	Had to adjust to meet time constraints by rushing or finishing too soon	Very good. Timing within stated time +/- 20%	Excellent. Timing within stated time +/- 10%
Presentation	Poor. Difficult to follow	Requires some effort to retain attention	Very good, easy to retain attention	Enjoyable, dynamic, stimulating
Audibility	Poor. Could not be heard throughout. Perhaps talked to board or to notes	Some difficulty with hearing some passages due to speed and/or volume	Very good. Could perhaps be improved on speed or volume. Clear throughout	Excellent. Clear diction, loud enough, right speed, faced the audience
Visual and other aids	Poor quality visual aids which lack clarity, relevance, logic	Too busy or too little information. Unclear in some places	Very good but could be improved with some attention to consistency or amount of content	Professional, clear, logical use of visual aids

Ability to answer questions	Failed to answer questions. Appeared to lack confidence/knowledge to respond to questions	Gave satisfactory response, perhaps required a bit of coaxing. Response could be improved with more confident delivery or more detail	Very good. Shows a good understanding of topic and questions. Responded appropriately to questions	Excellent. Gave confident, detailed and relevant responses. Clearly on comfortable with subject
Group presentation	Poor group performance. Division of sections and lack of consistency throughout the presentation suggest little or no teamwork. Inability to support each other during questions.	Satisfactory group performance. Presentation mostly consistent throughout and sections shared in a mostly logical way.	Very good group performance. Evidence of very good teamwork e.g. consistency throughout presentation, good division of sections and very good interactions during questions	Excellent group performance. Clear evidence of excellent teamwork e.g. cross-referencing or sharing responses to questions. Sections divided logically.

Poster presentation assessment criteria

Please note, some poster presentation assessments may not be assessed on all of the sections detailed below.

In years 3, 4 and 5, there will be greater focus on assessing evidence of breadth and depth of reading and understanding.

	<10	11-13	14-16	17-20
Background reading	Poor range of references. May be irrelevant or may be limited in number	Satisfactory range of references. Satisfactory use of review sources but limited, or no primary, sources.	Very good range of relevant references. Very good range of primary sources as well as reviews.	Extensive, relevant and recent. Excellent range of relevant primary sources as well as reviews.
Preparation	Little or no evidence of good preparation. Basic understanding of the key points. Most points are covered superficially/poorly. Poor analysis of material	Most of the key points are covered indicative of satisfactory preparation. One or two points may be covered in less depth, or content/importance of some points may not be fully understood	Very good preparation. Content indicates a very good understanding of all key points	Clear evidence of extensive preparation evidenced by thoughtful and insightful poster presentation
Presentation	Poor. Lacks clarity, focus, relevance and/or consistency. Difficult to follow evidence presented and to identify take home message	Satisfactory, with one or two lapses in clarity or focus or relevance or consistency. Take home message remains clear	Very good and clear throughout. Evidence presented and take home messages are clear	Excellent, clear and logical. Evidence presented and take home messages are very clear
Ease of viewing & navigation	Poor. Difficult to read much of the text and the images. Difficult to navigate around the poster content	Satisfactory. Most of the text and images are clear with one or two lapses in quality. Easy to follow most of the information presented	Very good. All text and images are very clear with only occasional lapses. Easy to follow all of the information presented	Excellent. All text and images are very clear. Very easy to follow all of the information presented
Question session	Failed to answer questions. Appeared to lack confidence/knowledge to respond to questions	Gave satisfactory response, perhaps required a bit of coaxing. Response could be improved with more confident delivery or more detail	Very good. Shows a good understanding of topic and questions. Responded appropriately to questions	Excellent. Gave confident, detailed and relevant responses. Clearly on comfortable with subject

<p>Group poster presentation</p>	<p>Poor group performance. Division of sections and/or lack of consistency throughout the presentation suggest little or no teamwork. Inability to support each other during questions</p>	<p>Satisfactory group performance. Presentation mostly consistent throughout and sections shared in a mostly logical way</p>	<p>Very good group performance. Evidence of very good teamwork e.g. consistency throughout presentation, good division of sections and very good interactions during questions</p>	<p>Excellent group performance. Clear evidence of excellent teamwork e.g. cross-referencing or sharing responses to questions. Sections divided logically</p>
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