

University of Bristol
School of Earth Sciences

MSc Palaeobiology
Programme Handbook 2017-2018



Palaeobiology Programme Director: Professor Davide Pisani

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The information in this handbook is correct at the time of printing. If there are any changes during the academic year an updated electronic version will be available online and you will be notified by e-mail.

Section 1 Introduction

1.1 Welcome!

Welcome to the School of Earth Sciences at the University of Bristol. This handbook is intended to help as you begin your studies, and will introduce you to some of the people in the School as well as providing a guide for your course.

Your academic success is important to us and we will give you every encouragement to complete your taught units and research project successfully. We will also strongly recommend your active participation in the various seminar series and discussion groups.

We hope that you will enjoy studying here and that you will make a full contribution to school life.

Professor Michael Walter
Head of School

Professor Simon Kohn
Head of Graduate School

Professor Davide Pisani
Programme Director

1.2 The University of Bristol

University College Bristol, founded in 1876, was the first institution in the United Kingdom to offer places to women to study in higher education on the same footing as men. The University of Bristol was granted its royal charter as a university in 1909, since when it has grown to about 17,000 students pursuing courses in six faculties.

1.3 The School

The School can trace its origins back to 1876, when Geology was offered as a subject at the original University College. When the University received its charter in 1909, Geology was taught within the School of Zoology and Geology. It achieved separate status in 1910, becoming the Department of Geology under its head then, Professor S. H. Reynolds. In 1992 its name was changed to the Department of Earth Sciences, to reflect the fact that the research and teaching activities had broadened to encompass environmental geosciences and Earth System science. In 2010 the University underwent some reorganisation and several Departments, including Earth Sciences, became Schools.

The School belongs to the Faculty of Science which comprises seven schools, Biology, Chemistry, Earth Sciences, Experimental Psychology, Geography, Mathematics and Physics, whose ethos is shaped by a shared ambition for academic activity. The School enjoys active collaboration with several others in the Faculty.

The School is situated at the historic heart of the campus, in the neo-Gothic Wills Memorial Building. Within the building are research and teaching laboratories, lecture rooms and a workshop.

In both teaching and research, the focus is on the physical processes that formed and now influence the Earth, and on testing hypotheses by observation, experiment and modelling. The School's quality of research is recognised internationally, as well as nationally; in the most recent Research Excellence Framework, the system for assessing the quality of research in UK higher education institutions, it was ranked in the top five UK Earth and Environmental Sciences schools.

In recognition of the revolutionary changes which have occurred in Geology in recent years, the School has expanded by making many of its appointments in relatively new areas such as environmental geochemistry, mineral physics, isotope geochemistry, geological fluid mechanics, seismology and computing.

The School encompasses five research groups covering the spread of Earth sciences topics. We teach eleven undergraduate degree programmes and recruit around 80-90 undergraduates. In addition to MSc Palaeobiology we have a taught postgraduate programme in Volcanology, as well

as an extensive PhD (by research) programme and the opportunity to undertake an MSc by Research.

The School has core-funded academic staff, professional services staff (administrative and technical), and a number of other staff and postdocs who are funded by bodies such as Marie Curie, the Royal Society NERC Fellows, BBSRC and other external sources. We typically have around 95-100 PhD students and 35 MSc postgraduates. Each year the School attracts a large number of academic visitors from overseas who carry out collaborative research with members of staff. The core-funded academic staff and most of the research fellows provide the teaching programmes in the School.

The School of Earth Sciences draws on funding from the Leverhulme Trust, Royal Society, NERC and other Research Councils, European Union, Environment Agency, European Space Agency as well as commercial sponsors such as Shell, BHP Billiton, Volkswagen, and insurance companies. There are also links with and support from nuclear waste disposal programmes.

1.4 Who's who?

	<i>Room</i>	<i>Tel</i>	<i>e-mail</i>
<i>Palaeobiology Programme Director</i> Prof Davide Pisani	LSB114*	41196	davide.pisani@bristol.ac.uk
<i>Palaeobiology Programme Founder & Head of Biological Sciences</i> Prof Mike Benton	LSB118*	41208	mike.benton@bristol.ac.uk
<i>Head of School</i> Prof Mike Walter	G22	15132 (PA)	M.J.Walter@bristol.ac.uk
<i>Director of Graduate Studies</i> Professor Simon Kohn	IC005	15002	simon.kohn@bristol.ac.uk
<i>Graduate Tutor</i> Dr Nick Teanby	IC002	15006	N.Teanby@bristol.ac.uk
<i>School Manager</i> Jane Coles	G20	45444	Jane.Coles@bristol.ac.uk
<i>Senior Tutor and Disability Coordinator</i> Dr Mary Benton	G35	45373	Mary.Benton@bristol.ac.uk
<i>Student Administration Manager</i> Karen Spencer	G19	15302	K.M.Spencer@bristol.ac.uk
<i>Postgraduate Administrator</i> To be appointed	G19	15133	earth-postgrad@bristol.ac.uk
<i>Undergraduate Administrator</i> Ann Morgan-Davies	G19	45236	Ann.Morgan-Davies@bristol.ac.uk
<i>Fieldwork Administrator</i> Holly Teanby	G19	15275	holly.teanby@bristol.ac.uk

* *Life Sciences Building*

The Earth Sciences School Office (G19) is open 9am - 5pm Monday to Friday, tel (0117) 954 5400.

The postgraduate administrator post is vacant and we are currently (September 2017) recruiting to the post. Please contact Karen Spencer, Student Administration Manager, until we are able to notify you of the new post-holder.

Information about other members of staff, including contact details, can be found on the School website here: <http://www.bristol.ac.uk/earthsciences/people/group/>

Section 2 General Information

2.1 Term and examination dates

Autumn Term: Monday 18th September – Friday 15th December 2017

Spring Term: Monday 22nd January – Friday 23rd March 2018

Summer Term: Monday 16th April – Friday 8th June 2018

Examinations: 8th - 19th January 2018

You will be expected to be in residence during term-time and for examinations, and for the duration of the summer vacation until submission of your thesis. Please note that resit or supplementary examinations for postgraduate taught students are usually arranged within 4 - 6 weeks of the original exam date.

2.2 Updating your personal information

It is VERY important to keep us informed of your contact address and mobile telephone number(s) so that we can communicate with you. This information is stored on a secure university database which only authorised users can access. You can update your own details by logging in to StudentInfo - www.bris.ac.uk/studentinfo.

2.3 Disability issues and learning support

The University's Disability Service <http://www.bristol.ac.uk/disability-services/> offers a wide range of services to ensure that students receive appropriate and accessible support. In addition to this central support the School has a Disability Co-ordinator, Dr Mary Benton, who acts as a channel for information about disability matters. Supporting students who may experience difficulties is very important to us but we can only do so if we are aware of them. If you think you have difficulties of any sort that you feel may impact on your studies, it is essential that you let Dr Benton know.

2.4 Rules and regulations

The University Regulations and Code of Practice for Taught Programmes is available online at <http://www.bristol.ac.uk/academic-quality/assessment/codeonline.html>.

Rules and regulations for students are online at <http://www.bristol.ac.uk/secretary/student-rules-regs/>.

2.5 Student representatives

The Earth Sciences Student Staff Liaison Committee (SSLC) is a body of students and staff who work together to improve learning, the working environment and student-staff dialogue in the school.

The role of the SSLC is to promote mutual understanding; student-staff cooperation to improve the school and in particular the student experience; develop innovative student initiatives and apply for department funding for them and to facilitate positive change in the school. Activities include the creation and revision of best-practice guidelines and establishing working groups on departmental issues. Outcomes are communicated in collaboration with BUGGS and the SSLC website.

The Student Union and the Academic Registry co-ordinate elections for representatives at the start of the academic year. Each year (cohort) of all taught programmes, both undergraduate and taught postgraduate masters, may be represented on the committee by election. A representative for mature students may also be elected, and a representative for International students. The role of representative involves consulting your peers and attending SSLC meetings to discuss matters that have arisen. There are usually 5 meetings during the academic year.

The meetings are attended by elected student representatives (see above), the Director of Undergraduate Studies, the Teaching Support Co-ordinator, the Undergraduate Administrator, the Student Administration Manager, the Subject Librarian and the President of the student society

BUGGS. The Teaching Quality Officer is the staff Chair and a student member of the committee is elected as student Chair.

2.6 Study space

G3 in the School of Earth Sciences is a shared study space for postgraduate taught MSc and 4th year undergraduate MSci students to work in. MSc students have unrestricted access however undergraduate MSci students may only use the room during hours when the main doors to the building are open and estates assistants (porters) are on duty. A hot-desking system is used, so you do not have an allocated desk, and you should not leave anything in the room.

There is designated MSc study space in the Life Sciences building that you can use. Again this is shared, hot-desking space, located close to the Biological Sciences Library, in the basement of the Life Sciences Building.

General study space, which all students may use, is available in several locations. A map can be downloaded at <http://www.bristol.ac.uk/library/study/spaces/map.pdf>.

2.7 Computing, printing and photocopying

The University provides students with a wide range of IT facilities. They are managed by IT Services, based in the Computer Centre on Tyndall Avenue. See the IT Services web site: <http://www.bristol.ac.uk/it-services/> for information and guidance on a variety of IT topics.

If you need assistance with an IT problem, IT Services run a Service Desk. You can contact the service desk in several ways:

Use the web self-service form at: [https://servicedesk.bristol.ac.uk/\(TOPdesk\)](https://servicedesk.bristol.ac.uk/(TOPdesk))

E-mail your query to: service-desk@bristol.ac.uk

Phone 0117 928 7870 (or 87870 on an internal phone)

Visit the Service Desk on the first floor of the Computer Centre between 08:30 and 17:30

There are networked photocopier/printers (combined black & white and colour) in G18 which are controlled using the University PAS Credit System. Users can print securely to these printers from anywhere on the University Campus using the Print Release system. Printing facilities are also available at libraries, at the Computer Centre and at many other locations around the precinct.

All new MSc students receive 1000 credits at the start of the academic year. Further print credit can be purchased online or in person at any University library and the IT Service Desk. See <https://www.bris.ac.uk/it-services/applications/printing> for more information.

2.8 Health and safety

The School of Earth Sciences takes Health and Safety seriously and makes every effort to ensure the safety of all staff and students both in the School and out in the field.

2.8.1 General health & safety information

Technical Manager and School Safety Advisor (SSA)

Stuart Bellamy (Room IC2.17) Ext 45404 stuart.bellamy@bristol.ac.uk

Deputy Safety Advisors (DSA)

Dr Chung Choi (Room IC105) Ext. 15116 P.C.Choi@bristol.ac.uk

Dr Chris Coath (Room L117) Ext. 45370 Chris.Coath@bristol.ac.uk

School of Earth Sciences safety website: <https://www.bris.ac.uk/earthsciences/safety/>

University of Bristol Health & Safety Office website: <http://www.bristol.ac.uk/safety/>

2.8.2 Emergency telephone numbers

Service	Internal	External telephone
Fire	112233	(0117) 331 1223
Police	112233	(0117) 331 1223

Injury & First Aid	Contact your nearest First Aider. A list of trained first aiders is on the Safety website - https://www.bris.ac.uk/earthsciences/safety/emergency.html .
Ambulance	If you require an ambulance dial 999 then inform Security Services and notify the University Safety Office on ext 88780 (0117 92 88780).
Radiation	School Radiation Officer: Dr Chris Coath ext 45370

The University Security Office should be notified of any emergency, as they will guide emergency vehicles and personnel. You should also call them if you feel unsafe in the School at any time, or if you suspect an intruder.

If you are calling for help on your mobile use 0117 331 1223, rather than 999, unless requesting an ambulance.

2.8.3 Safety in the School

Lone working: Lone working is an increasing health and Safety concern. It relates to working out-of-hours and/or in isolated environments. Before undertaking any lone working you must read the information on the Safety website <https://www.bris.ac.uk/earthsciences/safety/loneworking.html>.

Offices: Please read the Generic Office risk assessment, http://www.bris.ac.uk/earthsciences/media/Documents/Safety/risk/Generic_office_risk_assessment.docx

Display screens: the School does not provide training for Display Screen Equipment (VDU) users, but an online training guide is available on the University website: <http://www.bristol.ac.uk/safety/training/#e-learning>.

2.8.4 Safety in the laboratories

The potential of an incident occurring in the laboratories is greater than for in offices and lecture theatres because hazardous materials and procedures may be encountered. Prior to working in the Palaeobiology laboratories in the School of Earth Sciences and in the Life Sciences building, all MSc students must undertake a lab induction with the Palaeobiology laboratory manager, Tom Davies (thomas.davies@bristol.ac.uk).

A risk assessment must be completed before undertaking **any** work in an Earth Sciences lab. Information about risk assessments and how to complete one is on the School Safety website <https://www.bris.ac.uk/earthsciences/safety/risk.html>.

Particular Palaeobiology laboratory activities in the Life Sciences building will also require the completion of a risk assessment and so **it is vital that you speak to Tom and your project supervisor before undertaking any laboratory work.**

It is essential that all MSc students read and abide by laboratory and local rules and penalties will apply if rules are not adhered to.

2.8.5 Safety in the field

The potential of a serious incident occurring out in the field is much greater than that within the School and therefore it is essential to minimise the risks.

Anyone engaging in fieldwork must first carry out a risk assessment. The purpose of a risk assessment is to identify hazards, estimate the risks of an incident occurring and detail the precautions required to minimise those risks. Details and examples are on the fieldwork website <https://www.bris.ac.uk/earthsciences/fieldwork/riskassessmentguidelines/>.

2.9 Careers advice

The Careers Service, <http://www.bristol.ac.uk/careers/>, provides career-orientated workshops, practice interviews, assistance with CV writing, and personal guidance as well as a variety of courses to help develop student skills The Careers Service also has a section which is specifically for postgraduate taught students <http://www.bristol.ac.uk/careers/employable/postgraduate-taught/>.

Section 3 Library services

There are 9 branch libraries covering different disciplines and members of the University may use any of them. The Wills Building library and Biological Sciences library cover the most relevant collections for Palaeobiology students. Materials of interest may also be found in other branch libraries. Online information about library services is at <http://www.bristol.ac.uk/library/> and each branch library has its own web page linked from the main site.

Taught postgraduates may borrow up to 35 items. Please check with the individual branch library for details of loan periods. Please help your colleagues by returning books promptly, especially if they have been recalled by another reader.

The Subject Librarian with responsibility for Earth Sciences and Biological Sciences is John Hargreaves. He can help with resources and information of particular relevance to Earth Sciences students. See <http://www.bristol.ac.uk/library/subject-support/earth-sciences/> for more information and contact details.

Section 4 Support, help and advice

4.1 Sources in the School

If you have any queries or need help or advice you can talk to the following people:

- For health, personal and academic progress matters: Professor Davide Pisani (programme director)
- For health or personal matters: Dr Mary Benton (Senior Tutor)
- For all other School matters: the Postgraduate Administrator (to be appointed) or Karen Spencer, Student Administration Manager

4.2 Sources outside the School

4.2.1 Student services

The University's Student Services, <http://www.bristol.ac.uk/student-services/>, encompasses many different services. If you need help it is available and we urge you to seek it out at the earliest opportunity.

- Students' Health Service <http://www.bristol.ac.uk/students-health/>
A full NHS General Practice service for all University of Bristol students.
- Disability Services <http://www.bristol.ac.uk/disability-services/current-students/>
Confidential advice, information, guidance and support for students with a range of disabilities including but not limited to:
 - Autism Spectrum Disorders/Asperger's Syndrome
 - Dyslexia, Dyspraxia and other specific learning difficulties
 - Mental health difficulties
 - Mobility impairments
 - Sensory impairments
 - Unseen disabilities like Epilepsy/HIV/AIDS/Chronic Fatigue
- Student Counselling <http://www.bristol.ac.uk/student-counselling/>
Counselling services intended to support the mental health and wellbeing of students are offered in a range of formats: through supported self help, individual sessions or within a workshop or therapeutic group. You can access a one off session or opt for a series of sessions.
- Vulnerable Students' Support Service <http://www.bristol.ac.uk/student-services/vulnerablestudents/>
Co-ordinated support including assisting staff managing crises and emergencies for the most vulnerable students who are, for whatever reason, having difficulties functioning or continuing their studies for non-academic reasons.
- Multi-faith chaplaincy <http://www.bristol.ac.uk/chaplaincy/>
For students and staff of all faiths and none.
- Careers Service <http://www.bristol.ac.uk/careers/>.
- A-Z of services and resources for students <http://www.bristol.ac.uk/students/services/>

4.2.2 Accommodation

For advice and help with all aspects of accommodation during your studies.

<http://www.bristol.ac.uk/accommodation/current/>

4.2.3 Fees and funding

For advice and help about tuition and accommodation fees and funding your studies

<http://www.bristol.ac.uk/fees-funding/>

4.2.4 Bristol Student Union JustAsk service

Run by students for students. The service offers a range of information, support and advice. They can advise by telephone, email or in person (you are advised to make an appointment). Contact bristolsu-justask@bristol.ac.uk or 0117 3318634. There are also lots of advice pages on the Bristol SU website <http://www.bristolsu.org.uk/advice-and-support>.

Section 5 The MSc in Palaeobiology

5.1 Introduction

This programme aims to develop the student's interest in and knowledge and understanding of Palaeobiology, an interdisciplinary subject that emphasizes the understanding of past life on Earth. The MSc in Palaeobiology offers a combined taught and research-orientated programme with advanced coverage of quantitative aspects of the fossil record and the history of life. The overall aim is to bridge the biology-geology divide, providing students with a strong background for independent research, leading to a PhD or a career in science teaching, museums, and the media. The school provides students with high quality education and training, consistent with available resources, integrated with a world-class programme of research. The Palaeobiology Research Group maintains close contacts with other educational institutions (universities, museums) and the media, which we utilise to enrich teaching and learning provision. The objectives of the MSc in Palaeobiology are:

- (i) to achieve the highest standards of teaching and learning and to encourage all students to achieve their potential; to offer specialised training, beyond undergraduate-level, in the latest theories and techniques in the broad range of palaeobiological disciplines;
- (ii) to provide students with extended learning opportunities from expert (internal and external) instructors, including both the taught units and the research projects;
- (iii) to ensure that the programme is available to undergraduates with a variety of academic backgrounds by providing conversion courses; that the programme is flexible and responsive to changes in staff and post-docs in the Palaeobiology Research Group, integrating their expertise in the subject.
- (iv) to motivate students, and provide opportunities, to further their careers via intellectual and practical activities, including transferable skills, and by instilling skills and techniques required to carry out an independent research project, leading to publication of the results; to provide experience of the demands of a large and successful research group;
- (v) to help students develop personal skills, including communication skills (written, oral, web-based, and poster presentations), including public understanding of science; problem solving; independent evaluation of the evidence for competing hypotheses; research project design and implementation; team-working; time management and efficiency;

Students on the programme will develop quantitative and computational skills, including the use of statistical and data handling software. They will become proficient in critical analysis of scientific material from a variety of sources, including primary research documents. They will develop synthesis skills and the ability to write concise and informative material targeted for a variety of audiences, including the public understanding of science. They will be given information about research and career opportunities in related areas, and encouraged to build their skills portfolio during the programme and to take up careers-advice services provided by the University of Bristol.

5.2 Course structure

The curriculum comprises 180 credit points (cp) and is divided into two components: the taught units and the research component. The taught units are worth a total of 120cp and the research component is 60cp.

Some units are mandatory and the taught units are largely or entirely delivered in the Autumn term, with examinations taking place in January.

Following satisfactory performance in the course work and examinations associated with each taught unit, including the Research Methods unit (total 120cp), you will proceed to the Thesis (worth 60cp).

The Programme Structure is in the programme catalogue: <http://www.bris.ac.uk/unit-programme-catalogue/RouteStructureCohort.jsa?byCohort=Y&programmeCode=2GELY004T>

Unit outlines can be found in the Unit catalogue:

<http://www.bris.ac.uk/unit-programme-catalogue/Welcome.jsa>

5.3 Tutors

During the first week of the autumn term you will be assigned a tutor who will meet you regularly during the first term.

5.4 Assessment and progression

In order to be eligible for award of the MSc, 180 credit points are needed. A Postgraduate Certificate can be awarded if only 60 credit points have been obtained, and a Postgraduate diploma for 120 credit points. **Students must successfully pass the taught courses in order to progress to the thesis.** A student who is not awarded the credit for a unit may be permitted a second attempt to achieve a satisfactory standard to progress (i.e. a 're-sit') or to achieve any specified additional criteria.

A re-sit examination should normally take place as soon as possible after the learning experience within the University's recognised examination periods, while re-submission of essays and coursework should normally be within 4-6 weeks for full-time taught postgraduate students.

In order to be permitted a second attempt (i.e. re-sit) in any failed unit(s), taught postgraduate students must gain at least half of the credit points in the taught component by achieving the pass mark at the first attempt (*ie you must pass at least 60cp at the first attempt*), AND must have satisfied any additional criteria at the time they are considered by the progression board, or equivalent.

Under section 38.12 of the [Regulations and Code of Practice](http://www.bristol.ac.uk/academic-quality/assessment/codeonline.html) (<http://www.bristol.ac.uk/academic-quality/assessment/codeonline.html>), a School Exam Board has the discretion to allow a compensated pass in the event of a failed unit, where the mark may be considered a marginal fail. The School of Earth Sciences policy is to allow this at the first attempt only.

A progress board meets in the Spring and Summer terms to determine students' progress on a case-by-case basis. Students who fail to progress to the research project might be eligible for a Postgraduate Certificate or Postgraduate Diploma. The final mark for the MSc is a weighted average of the taught component and the research component.

All coursework and examination papers, along with the literature review and thesis, are made available for review by the External Examiner.

5.4.1 Submission of coursework in the School of Earth Sciences

The majority of coursework should be submitted electronically via Blackboard, the institutionally supported virtual learning environment: <https://www.ole.bris.ac.uk/webapps/login/>.

Instructions, and support material on how to submit electronically will be made available within Blackboard, together with information on how to check your work has been successfully submitted. All assessed coursework is run through software to check for plagiarism (see [section 5.4.6](#)).

If coursework is not to be submitted via Blackboard it should be handed into the School Office on the designated date. Unless otherwise advised work should be submitted by 2pm. Coursework handed in via the School Office requires a cover sheet which is available in the Office.

Coursework for which a specific size limitation is defined must be submitted on A4 paper, using one side of the paper at 1.5 line spacing, apart from any reference list, which should be in single spacing. The pages must be numbered, and the word total specified. The work must use Times font size 12, and with adequate margins (e.g. 2.5 cm) on each edge of the paper. Any figures/tables presented must be included as part of the main work and be of a matching size that is not too small or overlarge.

Some submitted work might contain appendices such as extensive data sets. Any such items must have been used in formulating the work, and the results analysed in a meaningful form in the main part of the work, such as by graphical representation of an analytical dataset. Any appendix must be carefully structured and not a loose assortment of various items. The appendix will not form part of the assessed material, but an appendix that is in other than a structured format will generate a 5% penalty on the project mark.

5.4.2 Penalties for late submission

It is essential that work is handed in on time so that feedback can be provided, and managing your time effectively to meet multiple deadlines is an important skill. For these reasons penalties will be

incurred for late submission. Penalties are applied according to Faculty of Science rules, which apply to all taught students (<http://www.bristol.ac.uk/science/undergraduates/penalties.html>):

- For work submitted up to 24 hours after the agreed submission deadline, a penalty of ten marks out of 100 from the mark the student would have received applies (e.g. coursework that is marked at 70% would then become 60% once the penalty is applied).
- For work submitted 2-6 days after the agreed submission deadline, the penalty will be 10 marks per day.
- Once seven days has elapsed after the submission deadline, the work will receive a mark of zero. NOTE work of a suitable standard may still be required to be submitted in order for credit to be awarded.
- Where course work is submitted electronically, weekends, vacations and University closure dates will be included when determining whether, or by how much the work is late.

5.4.3 Extensions to coursework deadlines

Extensions to coursework deadlines can be granted for good reasons, most often on medical grounds. Requests for extensions must be made before the original deadline.

A coursework extension request form (available from the School Office) must be completed and submitted to Professor Davide Pisani for approval. If an extension request is made on medical grounds, then the appropriate documentation (self-certificate for absence form or medical certificate), should be completed and attached to the extension request form.

No extension is valid unless the extension request form has been signed by the Programme Director.

The following are NOT considered as adequate reason for granting extensions to ANY deadlines:

- Not being aware of the deadlines.
- Not responding to deadlines because of a failure to read UNIVERSITY email messages. All students must access their university email account at least on a daily basis to ensure they receive information about any aspect of their course.
- Difficulties with any aspect of electronic storage of work (e.g. failure of hard disk/floppy disk etc), or network problems (e.g. printing of work). You should plan for such situations and make backup arrangements for electronic storage of coursework items. In particular do not leave the final printing of work to the last minute.
- Having a non-departmental commitment (e.g. sporting fixture) for which the date is known in advance; as with the above item you should plan in advance to meet the specified deadlines.

5.4.4 Extenuating circumstances which may affect your academic performance

We appreciate that there may be circumstances other than illness which might affect your performance in exams and assessed work - a recent bereavement or serious illness in your close family, for example. If you think that there are extenuating circumstances, like these, which should be taken into consideration, then you should make an appointment to talk to the Programme Director or the Senior Tutor about them in private and submit a completed extenuating circumstances (EC) form **before** any exam or other assessment. An EC form must be completed even when verbal notification has been made. Please note that the reporting of extenuating circumstances and their effects is the responsibility of the student.

You must use the University's EC form in order to notify us of any extenuating circumstances that may have affected your ability to fulfil the criteria for the award of credit points or to perform to the best of your ability in assessment events. If the proper documentation is supplied your circumstances will be considered by the School's Extenuating Circumstances Committee anonymously prior to any meeting of an Exam Board.

Your case is likely to be stronger if you inform us at the earliest opportunity of any difficulty; if you notify us after an exam or assessment has been completed we may not be able to make any dispensations. Extenuating circumstances that could have been raised before the meeting of the relevant board of examiners, but without good reason were not raised, will not be considered in the event of an appeal.

All forms are available at: <http://www.bristol.ac.uk/students/services/forms/> and a Bristol SU guide for students is also available <https://www.bristolsu.org.uk/justask/extenuating-circumstances>.

5.4.5 Marking

Marked coursework, accompanied by feedback will usually be returned to you by the unit director or the marker. The School aims to return marked coursework within 21 days of the submission date, excluding vacations.

5.4.6 Plagiarism

Plagiarism is taken extremely seriously by both the School and the University and it is important that you understand what constitutes plagiarism in order to avoid it. The University definition of plagiarism can be found here: <http://www.bristol.ac.uk/library/support/findinginfo/plagiarism/>.

The University uses the Joint Information Systems Committee (JISC) approved Plagiarism Detection Service Turnitin UK. See information about this service at <http://www.bristol.ac.uk/digital-education/support/tools/turnitin/>

5.5 The Thesis

Project proposal

Project titles will be circulated in Term 1, and you should develop your ideas by reading around and talking to potential supervisors. You are invited to make your project choices (1st, 2nd, 3rd), and we strive to allocate as many first-choice topics as possible. You then proceed to the two project-preparation units, EASCM0034 Literature Review, and EASCM0038 Research Methods in Palaeobiology.

Funding

The School covers the cost of necessary laboratory work associated with your project. We are able to fund modest fieldwork, travel or laboratory expenses towards your project, and you will be directed to apply for such funding as you prepare to undertake your project research. We also encourage students to seek project funding from outside sources. You can find some ideas on the intranet page <https://www.bris.ac.uk/earthsciences/research/funding/>. Closing dates are generally around December/ January, so project ideas must be clear by then. The Bob Savage Memorial Fund can also assist, and it is aimed especially at students who have made some efforts to raise funds elsewhere. The relevant closing date is March 15th (<http://palaeo.gly.bris.ac.uk/opportunities-savage.html>). Students can bid for specific funding requests associated with their research projects, and monies will be allocated on a case by case basis to the student.

Role of the thesis

The thesis is everything in this unit. The final mark depends on the quality of the thesis, *not on the amount of work a student did in the laboratory*. Students are therefore advised to keep focused on the thesis throughout, to write continuously, and not to delay writing until the very end. Students should discuss their ideas, especially in terms of how to present results, and the meaning of results, with their supervisors at all times. Students should share drafts of parts of the thesis with their supervisor(s) as early as they like. Your supervisor(s) will answer questions and provide feedback throughout, and they will provide detailed feedback on **one** draft of the whole thesis providing it is received at least ten days before the final submission date – use your peers to supplement this. Giving talks in Laboratory groups is a great way to find the strong focus or thread of your work (and of course the very best scientific papers have a strong thread running from beginning to end).

Thesis layout

The thesis should be formatted as a manuscript, intended for publication: discuss which journal is most appropriate with your supervisor at an early stage, and then look at lots of recent papers in that journal of choice to see how people present their papers. The thesis is to be less than 10,000 words in total (excluding title, abstract, contents, references, figures, tables, captions). Additional data may be provided as an electronic supplement (provided on one or more CDs); it is essential to structure the Appendix carefully and to provide a synopsis sheet listing the files provided and their roles. Markers will assess the scientific quality of your thesis, but also how convincingly you write it in the appropriate publishable journal format.

A possible layout of the thesis might include some or all of the following sections, but these will vary depending on the type of project undertaken. Use your judgement. Key items in **bold**.

Title Page: Neatly laid out and centred.

Abstract: Not exceeding 300 words; should be a comprehensive summary of your conclusions - a distillation of your thesis (i.e. a concise description of the problem(s) addressed, method(s) of solving them, and results). The abstract does not contain references. Write this after you have completed the report.

Acknowledgements: Page of thanks (who helped in scientific matters, advice, also indirectly by providing money, help etc.).

Declaration: "I declare that the work contained in this thesis is the author's own, except where stated or referenced. The views expressed in this thesis are those of the author and do not represent those of the University of Bristol", then signed by you and dated.

Table of contents: Include subheadings for each chapter.

Introduction: Introduction should be interesting. The first paragraph or two should be less dry than the scientific norm. Introduction should include what topic was addressed, and why it is important. Specimens, evolutionary problem, geological setting, etc. - a brief outline only; followed by a clear statement of the aims of your work in the final paragraph - "The aims of this project are to...". (Introduction starts on page 1 - previous pages in roman numerals).

Materials and methods: Analytical approaches, field techniques, data handling methods. It should be possible to reproduce exactly what you have done. Also list repositories of material and terminology.

Results: Factual observations, whether a field report, description of specimens, analytical results. One type of results chapter may be "Systematic Palaeontology" (if describing fossils), presented according to the rules of your journal of choice. Do not speculate or interpret your results – keep this for the Discussion.

Discussion: Comparisons and discussions - this is where you try to establish the meaning of your factual observations. Do not repeat the results, but choose broad-scale themes that reflect the impacts of your work, and consider also weaknesses of the methods.

Conclusions: Essentially an expanded abstract, presented in point form. Conclusions are also "So what?" statements (i.e. key ideas that can be drawn from your study). The conclusions are best done after you have had a break from writing, allowing you to put your thesis into perspective.

Suggestions for further research: How can the next researcher take your work further? (Also usually written at end of project).

References: Use a standard journal style or that used in *Palaeontology*. Make sure that all references in the text (but no others) are listed and set out in alphabetical order.

Appendices: This is useful for data that might break the flow of the text, e.g. tabulated data, measurements, additional photographs and graphs, etc.

You can read more general advice on report writing on the School web pages, material that you have been taught in the Scientific Communication unit.

Data storage and archiving

It is mandatory that the data generated by your project are appropriately stored and archived in order to maintain verifiability and repeatability of the results of research projects. **Prior to submission of your thesis**, you are required to create a data management plan with your supervisor and submit any supporting data that accompanies your thesis for digital archiving in the Palaeobiology group data storage. Such data may include excel spreadsheets, images, R scripts, graphs, or 3D digital models and analyses, and will be agreed with your supervisor. Archiving of digital data should be arranged with the Palaeobiology Lab Manager, and submitted, in advance of thesis submission.

Submission

The thesis must be submitted **by 8th September**. Please note that we require **3 copies** of your thesis to be submitted, soft bound, for marking and external marking purposes. You will also submit electronically through Blackboard and your work will be run through the plagiarism detection software.

If you are not able to submit by the deadline permission for an extension must be sought in advance. A short extension that does not exceed your expected programme end date may be agreed by the Programme Director in the same way as a coursework extension (see [section 5.4.3](#)).

If you will not be able to submit your thesis before your expected programme end date an extension of study must be applied for. This requires written support from the Programme Director and approval by the Director of Graduate Studies and the Graduate Dean of the Faculty. The extension request form must be generated by the Student Administration Manager or the Postgraduate Administrator. It is important to note that an agreed extension of study may involve the payment of additional fees.

Detailed information can be found in the Regulations and Code of Practice:

<http://www.bristol.ac.uk/academic-quality/assessment/regulations-and-code-of-practice-for-taught-programmes/extension-pgt/>.

Supervisors will encourage students to publish their results, and advise whether the thesis is publishable. If so, students will be advised how to turn their thesis into a paper, and they should produce a draft manuscript within six months of leaving the course; the student will be first author, with the supervisor(s) as junior author(s).

Assessment

The thesis will be marked by two Internal Examiners, and these marks will be overseen by the External Examiner. A School Examiners' Board will be held in November, provisional marks are considered by the Faculty of Science Postgraduate Degree Board in December, and, if successful, you may graduate at the February Degree Ceremony.

Assessment is based entirely, and solely, on the thesis. There is no viva or additional document. Marks are allocated as follows:

1. Student's understanding of the subject (20 marks).
2. Quality and originality of the science represented (20 marks).
3. Quality and appropriateness of analysis of the results (30 marks).
4. Quality of presentation: writing style, illustrations, conciseness and clarity (30 marks).

Thesis grades

- 1** A >70% mark thesis will be clearly written, focused, well documented, and well presented; the results, based on clearly mastered techniques, will be evidenced in a comprehensive, in depth and interesting manner and will include:
 - i) an introduction presenting the thesis subject while clearly building up to the aim of the project and the hypotheses to be tested - which will be explicitly expressed.
 - ii) a method section that will be clear and will talk directly to the hypotheses that the study is testing - i.e. what methods you are using and to do what.
 - iii) a results section that will be compact and presents only results that are relevant – irrelevant results are not included simply because they have been generated.
 - iv) a discussion section where the results are critically interpreted with reference to the current knowledge in the field.
 - v) a conclusion section clearly indicating the relevance of your results and indicating future venue of research that your results highlighted as potentially fruitful and in need of further investigation.
 - vi) a comprehensive and updated literature list that will link to your main text and indicate clearly your deep knowledge of the subject.

The result section and the thesis more generally is expected to include (as necessary) Figures and Tables. In a distinction thesis these will emerge as a clear, integral, part of the work. They will be self-explanatory and of high quality (i.e. the Figure and Figure caption, or the table and its legenda, have to be fully understandable with no reference to the main text of the thesis).

The whole thesis will be formatted following the standard of a scientific journal (the journal used as a template will be decided by the student in conjunction with their supervisor). Depending on the journal chosen, some of the above-mentioned sections (Introduction, Methods, Results, Discussion, Conclusions) might have to be merged or re-ordered.

- 2** A 65-69% mark thesis will show detailed understanding throughout, evidence that the student has mastered the necessary practical techniques, has a clear understanding of the aims, outcomes and implications of the work, and it will be well presented.

The thesis will have the same fundamental characteristics of distinction theses (points 1 to 8 above). However, differently from a distinction thesis, a high merit thesis will be characterised by a lower level of attention to details. Encountered problems may include, but are not limited to, one of the following. A high merit thesis will not have more than one or two such problems.

- i) The introduction, while complete might not build up to the aim of the project - e.g. the hypotheses that the project proposes to test are implicitly rather than explicitly expressed. Alternatively, the hypotheses tested might be expressed explicitly but in the context of an introductory section that is missing some important aspects.
- ii) The methods, while complete, might not clarify how they are used with reference to the hypotheses tested.
- iii) Results would be concise (as in a distinction thesis) but figures might not be entirely self-explanatory, e.g. charts with unlabelled axes, or reproduction of fossils with no scale bars, or incorrect scale bars.
- iv) The structure of the various sections might be difficult to follow because of poor grammar and spellings. The literature might not be correctly formatted, and more generally the style of the chosen journal might not have been adequately adhered to.

A high merit thesis is expected to display very good knowledge of the subject. Hence a comprehensive and up to date reference list must be present (as in a distinction thesis) and the references must be correctly cited in text.

- 3** A 60-64% mark thesis will show considerable practical competence and the results will be clearly presented. However, the thesis will have standard and depth that is just higher than that of an undergraduate laboratory report. That is, the thesis would still need quite a lot of effort to be turned into a manuscript for a scientific journal.

For example, a thesis concomitantly displaying more than two (but no more than a few), of the flaws illustrated in the high merit thesis section, or few other flaws of comparable seriousness will fall into this category. The text may be repetitive in parts, explanations may lack depth, and the results might not be concisely presented and interpreted in full. The reference list might be missing papers that should have perhaps been cited, but it will still include all key references, and these key references will be appropriately cited in text.

- 4** A 50-59% mark thesis will show an understanding of the research topic that is just acceptable, and some evidence of practical competence.

The results will be limited and superficially explored; they might not be concisely presented, and might include irrelevant results. Many of the flaws illustrated above (in the high merit section), or other flaws of comparable seriousness will be visible.

The write-up would have a depth comparable to that of an undergraduate research project rather than a manuscript for a scientific journal. The literature cited and the use of the citations will demonstrate only a superficial knowledge of the topic.

- 5** A fail <50%

The write-up may be incomplete and might lack key components. If all components are present the formatting might be inconsistent, writing might be incoherent, and not to the standard of a graduate student. The thesis will be unclear, and it will show few signs of any understanding of the topic. Gross errors and misunderstanding would be visible. Examples of gross errors include, but are not limited to, the following:

- i) incorrect claims based on the misinterpretation of the literature,
- ii) use of inappropriate methodologies,
- iii) research aims incorrectly presented,
- iv) key references ignored or incorrectly cited in a consistent way,
- v) statistics misinterpreted in the results and discussion sections,

- vi) lack of necessary figures and tables or figures and table of obviously poor quality, that are irrelevant or are missing key details.
- vii) results incoherently presented and incorrectly interpreted in the discussion and conclusion sections.
- viii) An inadequate list of cited paper, perhaps including only few papers, mostly outdated papers, or dominated by links to untrustworthy sources of scientific information.