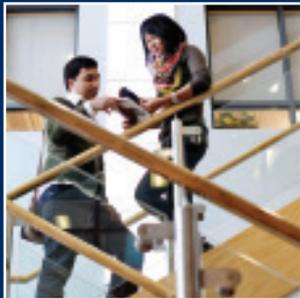
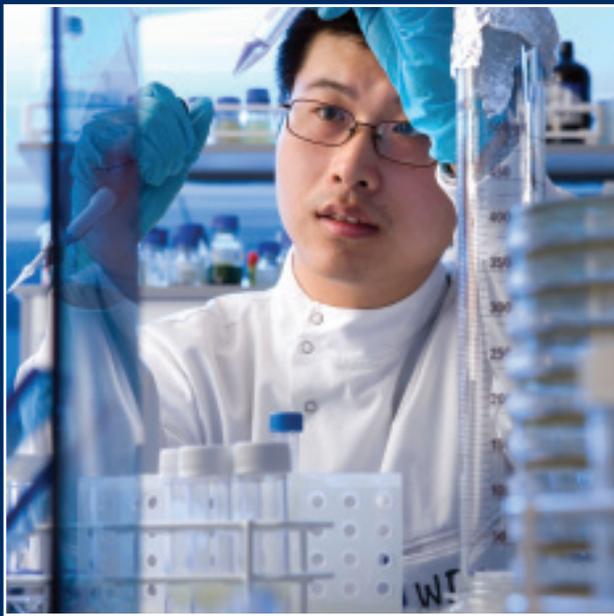


BBSRC EASTBIO Doctoral Training Partnership

Student handbook 2014-15



eastbio
the East of Scotland Bioscience Doctoral Training Partnership



BBSRC
bioscience for the future

Introduction to the BBSRC EASTBIO Doctoral Training Partnership

Welcome to EASTBIO

EASTBIO is the East of Scotland Bioscience Doctoral Training Partnership (DTP). It was established in 2012, in response to a Biotechnology and Biological Sciences Research Council (BBSRC) call for new DTPs. Our partnership comprises the universities along the east coast of Scotland, a key region in the UK for life sciences in terms of both academic excellence and industrial support and investment. EASTBIO's primary aim is to deliver high-quality, cutting-edge training for bioscience PhD students. The partnership allows us to provide enhanced training opportunities for our students, and additionally offers outstanding opportunities for collaborative research across the universities of the east of Scotland.

The EASTBIO partners are:

University of Aberdeen

University of Dundee

University of Edinburgh

University of St Andrews

Our associate partners are:

University of Stirling

Scottish Agricultural College

We also work with the pan-Scottish research pool:

SULSA (Scottish Universities Life Science Alliance)

Studentships:

Our first cohort of 35 students started in autumn 2012, with core funding from the BBSRC coupled with additional funding from each of the partner universities. In 2013, a second cohort of 36 students joined the programme. This autumn we welcome our third cohort of 33 students.

Research themes:

Around 50% of our student projects are designed to meet key priority areas, as defined in the BBSRC strategic plan: <http://www.bbsrc.ac.uk/funding/priorities/priorities-index.aspx>

Bioenergy and Industrial Biotechnology

Food Security

Basic Bioscience Underpinning Health (Ageing)

The remaining 50% of projects will be across the spectrum of world-class underpinning bioscience funded by the BBSRC in our partnership.



THE UNIVERSITY *of* EDINBURGH



University
of
St Andrews



UNIVERSITY
OF ABERDEEN

Welcome from the Management Group

Dear PhD students,

Welcome to the EASTBIO Doctoral Training Partnership. You have beaten off stiff competition to receive one of our prestigious studentships. We hope that this handbook, our induction day and website will help to familiarise you with the aims of the partnership and our training programme.

EASTBIO is a partnership of four universities – Aberdeen, Dundee, Edinburgh and St Andrews - and each of you will be registered in a host school or department within your university. You will be following the local training and assessment programme of your host institution. However, through EASTBIO you will access additional enhanced training opportunities. These will include:

- interactive discussion groups run across the partnership based on our research themes, which will provide insight into the key research questions in your area and a chance to build your own collaborations with researchers working in your field across the east of Scotland;
- high level bioscience skills training, in areas such as systems biology and data analysis;
- our annual residential symposia where you will be able to share your research and develop its impact on the world around us; and
- an exciting new scheme of Professional Internships for PhD Students (PIPS), which will give you the opportunity to learn valuable skills in the workplace.

We ask that you each take a proactive approach to building your own training programme with the support of your supervisors and EASTBIO. You will be required to complete a skills audit and training record each year and we will monitor your progress to help ensure that you complete your PhD within four years, and graduate with a set of skills that will enable you to progress successfully on to your chosen future career.

As a new PhD student, you will be establishing yourselves in an exciting, vibrant research environment – meeting lots of new people, possibly finding your way around in a new city, country or culture and being bombarded with information on just about everything. If any of us can assist you with settling in, please don't hesitate to contact us (contact details are provided in this handbook).

We look forward to meeting you in person at our induction day which is hosted by the University of Dundee on **Friday 21st October 2014** at the West Park Conference Centre. You will meet the other new EASTBIO students and supervisors at this induction and networking event.

Wishing you an excellent start to your studies,



Dr Irina Stancheva
University of Edinburgh



Professor Bernadette Connolly
University of Aberdeen



Dr Arno Muller
University of Dundee



Professor Colin Farquharson
University of Edinburgh



Dr Judith Sleeman
University of St Andrews

Disclaimer: Every effort has been made to ensure that the information contained within this handbook is correct at the time of publication. EASTBIO training courses are subject to ongoing development which could necessitate cancellation of, or alteration to, the advertised courses. The EASTBIO DTP reserves the right to make changes at any time without prior notice. Should you notice any errors or inaccuracies in this handbook or on our website, please let us know by emailing enquiries@eastscotbiodtp.ac.uk.





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Introduction to the Training Programme

All of you will be registered in a host school, department or institute within your University, and we expect you to comply with the local induction and training requirements of your research group and host department. If you are unclear about these requirements, please contact your local administrative manager using the contacts in this handbook.

The EASTBIO DTP will provide you with enhanced training opportunities that will supplement the training provided to you locally. This aims to ensure that you receive training at the highest level possible, so you can make the best of your time as a research student and are equipped to compete against the best in the world when you move into your chosen career at the end of your studies.

Our programme is made up of four strands:

Training Strand 1: Research Skills

Training Strand 2: Bioscience Skills

Training Strand 3: Generic Skills

Training Strand 4: Professional Internships for PhD Students (PIPS)

More detail on each of these strands is set out in this handbook. As well as the information in this handbook you should keep an eye on your emails and our website for updates.

How to build your personalised training plan

We recognise that each of you will start the EASTBIO PhD programme with different abilities and different aspirations. For this reason we have specified minimum expectations for the amount of training we expect you to complete during your 4 year programme, with some key events that are compulsory for all EASTBIO students. In fact, we expect that the majority of you will want to take advantage of more of the opportunities available to you than is required. The sheer range of training

options available to you in your host department and through EASTBIO may be overwhelming, so we suggest you start as soon as possible by working through our skills audit and developing your personalised training plan. We ask that you then complete your training record and update your skills audit and training plan at your annual review each year.

Skills Audit

We require each student to complete a skills audit upon beginning your PhD studies. This should be discussed with your supervisory team at the first available opportunity, and not later than 10 weeks into your PhD, to help you to develop your training plan. When developing your training plan, bear in mind what training will be most relevant at each stage of your PhD; you do not need to cram all of your training into year 1.

Our skills audit was developed with the Institute for Academic Development, based at the University of Edinburgh, and is founded on the attributes set out for researchers in the Vitae Researcher Development Framework.

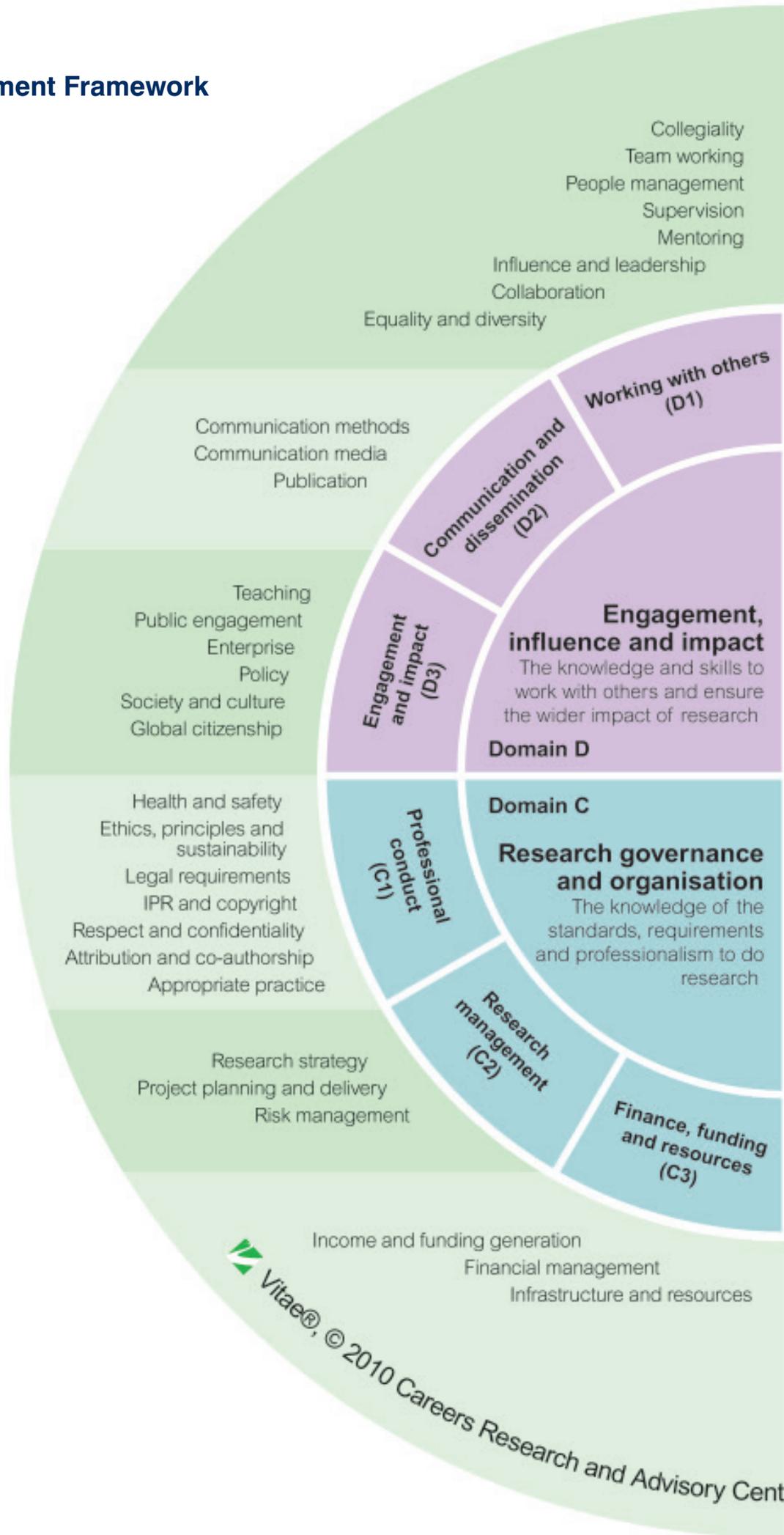
You can download the skills audit from the Student Resources section of the EASTBIO website.

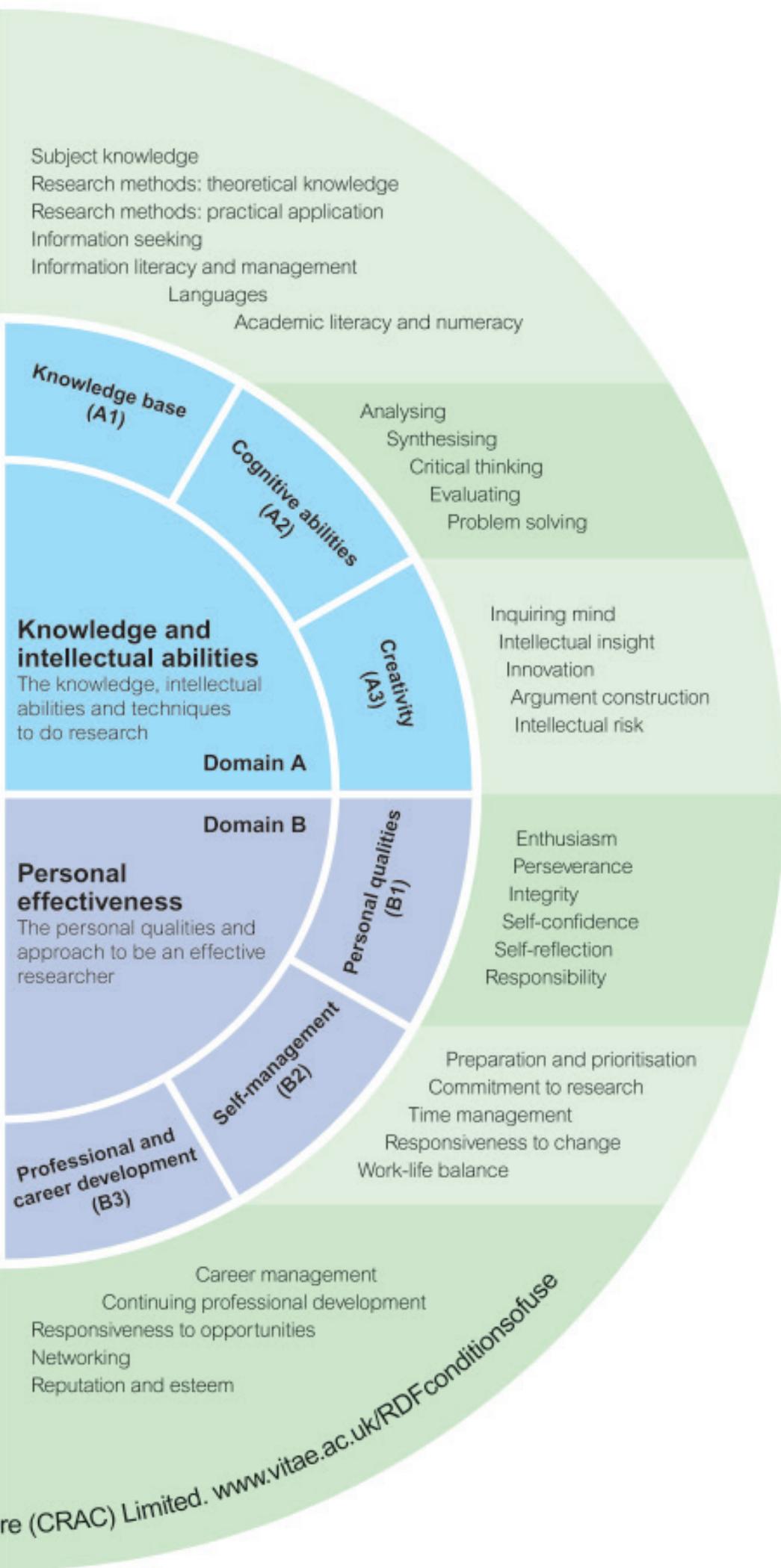
Training plan and record

This document maps directly onto the development areas highlighted in the skills audit. You should complete your training plan after you have discussed it with your supervisor before week 10, and update your training record in advance of each annual review meeting that you have with your thesis committee. A copy of your training plan and record should also be sent to the EASTBIO administrator annually.

You can download the training plan and record from the Student Resources section of the EASTBIO website.

Researcher Development Framework







Training development

One of the main aims of the EASTBIO DTP is to share existing training provision across the partnership and develop new training in response to the needs of you and your supervisors, and your future employers. If you cannot find the training you need, contact your local EASTBIO managers, as they will have a good overview of the training offered across the four partner institutions and through SULSA. If you still see a gap in provision, please contact enquiries@eastscotbiodtp.ac.uk with a view to filling that gap.

Costs incurred through training

We aim to provide all your training free of charge or at a minimal cost. Each of you will have access to the following funds (in addition to fees and stipend) to support your training:

- Travel and conference allowance: £230 per annum which will cover most of the expenses involved where training is delivered in person rather than online. Please ask your local administrator if you are unsure how to access these funds.
- Research Training Grant: £5000 per annum (this is reduced to £2500 in year 4). This grant may be held directly by you or your supervisor or it may be held by your department. It should be used to cover the purchase of a laptop at the start of your programme, the research costs incurred by your project and may also be used to cover any more expensive travel and training costs incurred. Please ask your local administrator if you are unsure how to access these funds.
- PIPS Grant: Where your PIPs will incur significant additional costs you can apply to our competitively allocated grants competition. Further details of this competition can be requested from ntp@sulsa.ac.uk.

Acknowledging your funding

Please acknowledge the BBSRC in any posters or otherwise published work, using the sentence: This work was supported by the BBSRC (grant number BB/J01446X/1). If needed, you can download logos from the Student Resources section of the website.

Your Training Programme: Summary of Requirements

All EASTBIO students must complete your first skills audit and training plan by 10 weeks. Thereafter you must complete your training record annually and then revise your skills audit and training plan for the upcoming year. The training record must be submitted annually to your local EASTBIO administrator and supervisory committee.

The skills audit, training plan and record can be downloaded from the Student Resources section of www.eastscotbiodtp.ac.uk.

All EASTBIO students must take part in the following mandatory components of the training programme:

- **Induction in year 1**
- **Training Strand 1 – Research Skills:** a minimum of one 10 session course of theme training in year 1
- **Training Strand 2 – Bioscience Skills:** a minimum of 40 hours training to be undertaken by the end of year 4
- **Training Strand 3 – Generic Skills:** a minimum of 20 hours training each year plus attendance at the Symposium each year
- **Training Strand 4 - PIPS:** an internship of 3 months duration to be undertaken by the end of year 3



Training Strand 1: Research Skills

EASTBIO student projects starting in 2014 are designed around four key research themes:

Bioenergy and Industrial Biotechnology

Food Security

Basic Bioscience underpinning Health (Ageing)

World-class Bioscience

Details of which research theme you belong to and your theme leader will be given at Induction on 21st October when you will also have an opportunity to meet other students from your thematic group.

As part of one of these thematic groups, you will be required to take a 10 session theoretical training that will introduce the key areas in your theme and develop your critical reading skills. The course will be discussion based and so it will also give you a chance to get to know the other EASTBIO students and supervisors working in similar or complementary fields to your own. Each theme has a theme leader and it may be that they develop follow up activities for you and your theme group after this initial 10 session course.

The research training provided through EASTBIO will supplement the training you will already receive in your research group and host department. We expect all EASTBIO students to be actively involved in the research culture of your group and department. Do take advantage of all that is there for you including optional undergraduate and MSc modules, journal clubs, seminars and conferences in your field.

Blackboard Collaborate

Blackboard collaborate is a simple to use web-based platform that creates a virtual, interactive classroom that can be accessed from your own computer. If required by your thematic group training, you will be given an introduction to Blackboard Collaborate and its features, and detailed instructions for getting started will be made available to you.

Training Strand 2: Bioscience Skills

During your PhD studies, you will need to develop the key skills that will underpin your research as a bioscientist. As an EASTBIO student you are expected to build up a minimum of 40 hours of training throughout your PhD. We are particularly keen that all our students develop skills in mathematics and data analysis and new ways of working, skills which the BBSRC believe to be essential to future research careers.

We expect that you will find most of the bioscience skills training you need in your lab and host university. However, places can be made available on training courses at partner universities for EASTBIO students on request, so if you cannot find the training you need at your host university please send an email to your local EASTBIO administrative manager for assistance in identifying useful courses elsewhere within the partnership. A listing of available local courses will be available for download from the website, attendance at these or at other courses can count towards your hours of Strand 2 training.

EASTBIO will also offer a limited number of places on the following additional optional courses, available on a first-come, first-serve basis. Dates for these in 2014/15 are to be confirmed and will be advertised in our newsletter or by email. We hope to add to this group of courses as the partnership develops.

Recommended courses 2014/15:

From Observation to Explanation

Good Practice in Data Management

SysMIC: Systems training in Maths, Informatics and Computational Biology

Mass spectrometry-based proteomics course

Introduction to Programming in Python

R/Bioconductor and Unix





Microbial community structure and function in the rumen of sheep

Authors: [Names]

Abstract: [Text]

Introduction: [Text]

Methods: [Text]

Results: [Text]

Conclusions: [Text]

References: [List]

A woman with short red hair, wearing a red cardigan over a patterned top, dark pants, and brown boots, is looking at a poster.

A man with short brown hair, wearing a grey sweater over a white shirt and grey trousers, is looking at a poster.

The consequences of MHC... on the sheep population

Authors: [Names]

Abstract: [Text]

Introduction: [Text]

Methods: [Text]

Results: [Text]

Conclusions: [Text]

References: [List]

The environmental stress therapeutic...

Authors: [Names]

Abstract: [Text]

Introduction: [Text]

Experimental plan: [Text]

Results: [Text]

Conclusions: [Text]

References: [List]

Training Strand 3: Generic Skills

Introduction to generic skills training

The acquisition and development of personal transferable, employment-related and generic research skills is an important part of postgraduate research training. It is now an expectation of most research councils as outlined in the Researcher Development Framework, and is strongly recommended by EASTBIO.

To be competitive in your future career it is vital that you engage with training beyond the essential needed for your own research. As the knowledge economy expands, employers expect advanced professional skills in addition to excellent qualifications. Focussing on skills which complement your academic research and enhance your employability will give you a competitive edge both now and in the future.

How to access generic skills training

All EASTBIO students are required to complete 20 hours of generic skills training in each year of your programme; you should record the training you attend and the number of hours completed on your training record. We expect that you will find the key generic skills training you need in your host university. However, places can be made available on training courses at partner universities for EASTBIO students on request, and you will also find that the BBSRC and Vitae provide additional development opportunities. As well as information

provided to you by your host department, you will find the following key links essential in identifying courses:

Aberdeen: www.abdn.ac.uk/sfre

Dundee: <http://www.dundee.ac.uk/opd/courses/>

Edinburgh: www.ed.ac.uk/schools-departments/institute-academic-development/postgraduate/doctoral

St Andrews: <http://www.st-andrews.ac.uk/capod/students/pgresearch/>

BBSRC: <http://www.bbsrc.ac.uk/funding/studentships/training-bulletin.aspx>

Vitae: <http://www.vitae.ac.uk/researchers/1218/Postgraduate-researchers.html>

EASTBIO strongly recommend two online generic skills courses:

MANTRA: Research Data Management Training
<http://datalib.edina.ac.uk/mantra/>

eWriting: Writing Skills for Graduate Students
<http://www.ewriting.org.uk/>

(Please email enquiries@eastscotbiodtp.ac.uk if you are not an Edinburgh registered student as we will need to request access for you.)

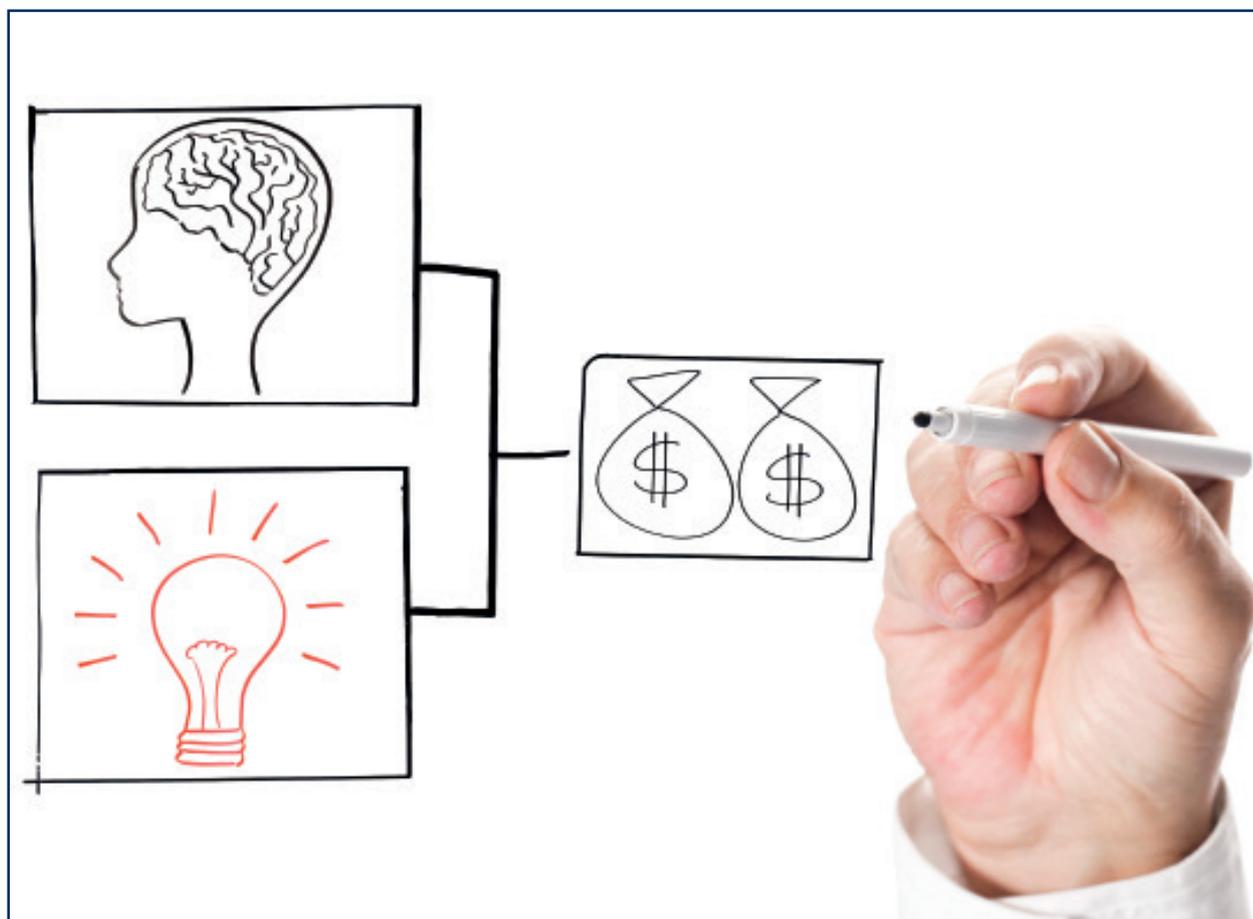
Annual symposia

We will also include specially designed generic skills development in our annual summer symposium, which you must attend (though fourth year student attendance is optional). Look out for emails about the summer 2015 symposium later this year. The symposia are a great chance to meet up with your fellow EASTBIO students and supervisors, tell them all about your research and develop additional generic skills.

Training Strand 4: Professional Internships for PhD Students (PIPS)

In 2012 the Biotechnology and Biological Sciences Research Council (BBSRC) Doctoral Training Partnerships (DTP) programme began offering an exciting opportunity for any non-academic organisation to take advantage of fully funded Professional Internships for PhD Students (PIPS). The internship is three months long, can be run any time throughout the year and the student is usually based within the host organisation. They can be taken in one 3-month block or a number of shorter blocks giving the flexibility to plan in sync with the business priorities. Students put their PhD research on pause for the internship and resume once complete. Internships can be in any field or sector including industry, business, communications, publishing, project management, teaching...

The Professional Internships are mandatory for all PhD students and aims to provide them with the opportunity to carry out a piece of work unrelated to their doctoral research during their PhD. Such experience is important both to help early career researchers understand the wider context of their research and to expose them to the range of opportunities in which they can apply their PhD skills and training after they graduate.



What type of internship is suitable for PIPS?

PIPS is a defined project with tangible outcomes that can be carried out in any organisation, as long as it gives you a professional experience outwith your immediate research-related environment. This is a chance to think creatively about the types of experience you would like to gain, so PIPS will benefit your career in the long term. This is not a stop-gap, but a valuable life experience.

These are just a few examples:

- A defined and applied research project in industry (not related to your PhD).
- Managing a non-research project.
- Administering a research project or grant.
- Developing policy for a research council or government.
- Carrying out a marketing project for a company or organisation.
- Communicating science to the public or younger pupils through an outreach programme.
- Developing or helping to develop a new product or service for a company.

Planning your PIPS

East of Scotland Bioscience DTP approach is that internships should be student led; taking place between month 12 and 36 of students PhD. It is important to think of the following possible constraints:

- The timing of your most important experiments
- Field-work seasons you may need to work around
- Resource bottle-necks in your research project
- Conferences and meetings you may want to attend
- Family commitments
- Costs associated with your internship such as travel and accommodation

You may also want to complete some relevant generic skills training in preparation for PIPS, such as:

- CV writing and interviewing skills
- Entrepreneurship
- Time management
- Communication skills

Ensuring the PIPS Provider Meets the BBSRC PIPS Criteria

If the answer to any of the questions below needs to be 'NO' then the PIPS host organisation will not meet with the BBSRC PIPS criteria.	YES	NO
Does my PIPS host provide a professional environment that is outwith academic research?		
For my PIPS project will I be doing something that has nothing to do with my PhD research project?		
Will I spend a total of 3 months, 12 weeks or 60 days doing my PIPS project?		
Will I get the opportunity to develop my professional skills?		
Will the host organisation appoint a mentor to supervise my PIPS project on a day-to-day basis?		
Does the PIPS host organisation have a health & safety policy and insurance & liability?		

What are EASTBIO and the BBSRC expecting from students with regards to PIPS?

It is the student's responsibility to do the following actions according to BBSRC and EASTBIO funding requirements:

- Source a suitable PIPS project with a suitable PIPS provider
- Plan the PIPS into your PhD work in collaboration with your PhD supervisor
- Complete all the necessary paperwork (forms, agreements, approvals etc...) for your PIPS and communicate them to EASTBIO, host university and/or host organisation, in accordance with milestones and deadlines set out in the 'PIPS Student Guide'
- Engage with your PIPS provider professionally when you are developing your PIPS project
- Carry out and complete a PIPS of suitable length and scope, whilst adopting a professional behavior in the host organisation
- Report on the outcomes of your PIPS to EASTBIO and BBSRC according to the requirements set out in the PIPS Student Guide.

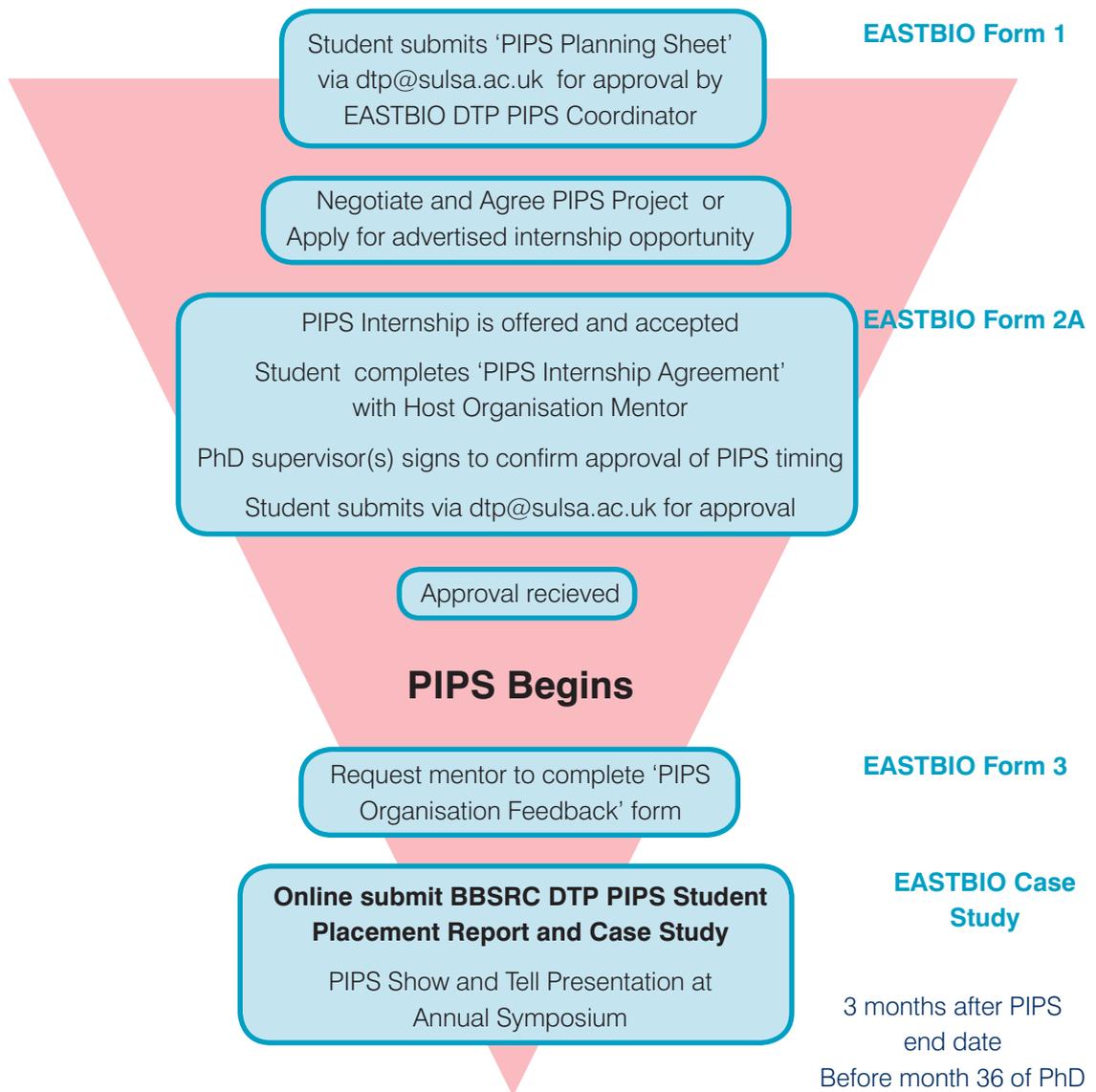
There are four mandatory forms/documents to be filled in and returned to EASTBIO for approval and two mandatory documents to be communicated to the BBSRC.

Where can I get more information on PIPS?

Please read 'Professional Internships for PhD Students Guide for Students' and download forms from the EASTBIO website.



PIPS: Summary of Responsibilities of PhD students



EASTBIO Contacts

All of these contacts are very happy to be contacted with any queries you have about EASTBIO so please do get in touch!

EASTBIO Administrator

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EH9 3BF
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Fax: **01334 463443**

Email: **js16@st-andrews.ac.uk**

2013 Cohort Student Representative:

Georgina Glaser
Email: **glg2@st-andrews.ac.uk**

You!

We are looking for volunteer 2014 student representatives from each partner university to act as our student representation committee alongside our 2013 committee. You'll get the chance to feedback to the management group on training and other support for EASTBIO PhD students and will have a major role in developing our annual symposia. We'll ask for volunteers at the induction day; if you are interested please send an email to enquiries@eastscotbiodtp.ac.uk.

Notes

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This publication can be made available in alternative formats on request.

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336.