Centre for Data Analytics and Society

Handbook
2020-2021

Table of Contents

Introduction

Welcome to the Centre for Data Analytics and Society (CDAS), funded by the ESRC with support from a number of external partners and based across the Universities of Leeds, Liverpool, Manchester, and Sheffield.

This handbook aims to provide you with some of the information that is common across all of the institutions, to help you understand how the programme is structured and to outline the expectations you should have about the course; what we expect from you and what you should expect from us.

You should also refer to your 'home' institution and departmental handbooks as well as the ESRC terms and conditions, links for which can be found below. Please note these links direct to your institution's intranet, so can only be accessed on campus or via your home institution's remote access system.

Leeds -
https://minerva.leeds.ac.uk/webapps/blackboard/content/listContent.jsp?course_id=_401326_1&content_id=_2987472_1&mode=reset

Liverpool
https://www.liverpool.ac.uk/intranet/environmental-sciences/student-information/handbooks/

Manchester
http://www.socialsciences.manchester.ac.uk/student-intranet/postgraduate/postgraduate-taught/
http://www.humanities.manchester.ac.uk/pgr-handbook-soss/

Sheffield
https://www.sheffield.ac.uk/smi/study-with-us/current-students/pg-handbook/index

This Handbook is intended to be a useful guide for students in the Centre. Every effort has been made to include accurate information for the current academic year. However, it is subordinate to all Regulations and Ordinances of the Universities currently in force and should also be read in conjunction with local guidance from your Home University.

The Handbook is kept under continuous review and a live copy is posted on the website https://datacdt.org/current-students/. The live copy should always be regarded as the current version. If you have feedback or information about errors/conflicting advice please email: datacdt@leeds.ac.uk.

Your 'Home University' will be the university at which you are registered, where your PhD supervisors are based and you will undertake the most of your modules for the MSc part of the programme. You will also be registered as a visiting student at the other three universities so that you can access the facilities at those universities.

Partner Institutions

University of Leeds	***Leeds Institute for Data Analytics*** Website: http://lida.leeds.ac.uk/ Established in 2014, with major investments from the UK Research Councils and the University of Leeds, LIDA has developed state of the art physical and IT infrastructures to raise the bar in standards of data quality, access, protection and exploitation. There is a growing movement around the world to ensure the effective use of vast data collections to drive research, policy development and public good initiatives. The Leeds Institute for Data Analytics brings together applied research groups and data scientists from all disciplines, opening up new opportunities to understand health and human behaviour and casting light on the action required to tackle a wide range of social and environmental problems.
University of Sheffield	***Sheffield Methods Institute*** Website: https://www.sheffield.ac.uk/smi The SMI has established itself an as interdisciplinary methods hub for the development and application of innovative methods in social research encompassing a broad spectrum of substantive and methods-based disciplines at Sheffield. The SMI aims to develop an interdisciplinary community of methods-orientated researchers with links to a wide range of departments including the iSchool (Information School), the Centre for Criminological Research, the Advanced Computing Research Centre, Department of Computer Science, the Centre for Signal Processing and Complex Systems among others.
University of Liverpool	***Liverpool Geographic Data Science Lab*** Website: https://geographicdatascience.com/ The Geographic Data Science Lab at the University of Liverpool are an interdisciplinary research centre interested in the development and application of new methods at the intersection of Geographic Information Science, Spatial Analysis, Applied Geocomputation and Data Science. As a group we hold various substantive interests related to the form, function or dynamics of human activities and their contexts.
University of Manchester	***Manchester Data Science Institute*** Website: http://www.datascience.manchester.ac.uk/ Manchester's Data Science Institute acts as an access point to the University's expertise in data science, facilitates interactions between data science researchers and problem holders, owns the University's data science strategy, and will deliver sustainable support for the community. Manchester has an engaged data science community of almost 250 investigators, with methodologists embedded in Schools across the University addressing problems in extracting meaning from data, managing data volume, the variety of data used in analyses, the velocity with which it is produced and the veracity of those data.

Important dates and Information

University Term Dates

Each of the Universities have differing term dates, please see details in the links below. Any modules you take at your host institution will fall within these dates for teaching and assessment:

Leeds   http://www.leeds.ac.uk/info/130505/term_dates
Liverpool   https://www.liverpool.ac.uk/term-dates/
Manchester   http://www.manchester.ac.uk/study/undergraduate/teaching-learning/semester-dates/
Sheffield   https://www.sheffield.ac.uk/about/dates

Core Module dates

Institution	Module title	Date of module	Deadline
Leeds	Programming for Social Science	14-18th September 2020	4th Nov/16th Dec 2020
Liverpool	Data Science Studio	18th-22nd January 2021	9th March 2021
	Understanding Data and its Environment	29-31st March & 8-9th April 2021	Mark Elliot to confirm
Manchester			
Sheffield	Social Analytics & Visualisation	Mid June tbc	

Partner Event

The 2020 Partner Event is delayed due to Covid restrictions, and will likely be held around Easter time, details will be shared as soon as possible

Programme Descriptions

University of Leeds http://webprod3.leeds.ac.uk/catalogue/dynprogrammes.asp?Y=202021&P=PGR-DATS-IFT

University of Liverpool: https://www.liverpool.ac.uk/geographic-data-science/study-with-us/centre-for-doctoral-training/

University of Manchester: http://www.datascience.manchester.ac.uk/education/centres-for-doctoral-training/cdt-data-analytics-and-society/

University of Sheffield: **No link provided, please check with local contacts**

CDT Key Staff contacts
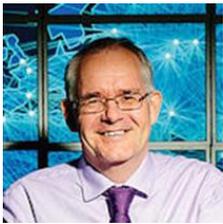
	Mark Birkin CDT Director University of Leeds Tel: 0113 343 9680 (LIDA reception) Email: m.h.birkin@leeds.ac.uk
	Claudia Rogers CDT Centre Manager University of Leeds Email: c.j.rogers@leeds.ac.uk
	Hayley Irving CDT Centre Coordinator University of Leeds Tel: 0113 343 7577 Email: h.irving@leeds.ac.uk
	Alex Singleton CDT Co-Director University of Liverpool Tel: 0151 794 2860 Email: Alex.Singleton@liverpool.ac.uk
	Mark Elliot CDT Co-Director University of Manchester Tel: 0161 275 4257 Email: mark.elliot@manchester.ac.uk

	Gwilym Pryce CDT Co-Director University of Sheffield Tel: 0114 222 7121 Email: g.pryce@sheffield.ac.uk
	Lex Comber Leeds Programme Manager University of Leeds Tel: 0113 343 9225 Email: a.comber@leeds.ac.uk

CDT Local contacts

University of Leeds

Jamie Mullen
Taught Postgraduate Administrator
Tel: 0113 343 3346
Email j.l.mullen@leeds.ac.uk

Jacqui Manton
Research Postgraduate Administrator
Tel: 0113 343 6531
Email j.manton@leeds.ac.uk

University of Liverpool

Jayne Avies
PGR Student Experience Administrator
Tel: 0151 795 9055
Email: envsci@liverpool.ac.uk

University of Manchester

Thomas Jenkins
Research Postgraduate Administrator
Tel: 0161 275 4869
Email: Thomas.Jenkins@manchester.ac.uk

University of Sheffield

Keely Armitage
Tel: 0114 2220174
Email: fcs-pgr@sheffield.ac.uk.

Postgraduate Research Council (PGRC)

You are encouraged to form a PGRC to discuss matters concerning the CDT cohort, administration of the programme, supervision monitoring, module content and teaching etc.

The committee is invited to bring reports to the Management group twice a year with representatives from the PGRC invited to attend. If you would like to run as a representative to your cohort, please let Claudia Rogers know.

Registration

You will need to register following the guidance of your home institution – please see guidance in the links below:

Leeds - http://students.leeds.ac.uk/info/10102/registration

Liverpool - https://www.liverpool.ac.uk/csd/quickstart/academic-registration/

Manchester - https://www.welcome.manchester.ac.uk/get-ready/become-a-student/register-as-a-student/

Sheffield - https://www.sheffield.ac.uk/registration

Module enrolment
You will need to choose and confirm the modules you wish to take as part of your programme of study. You will need to discuss which modules are appropriate for you to select as part of your initial Training Needs Analysis with your supervisor. The form and guidance for this are included at the back of the handbook.

Teaching and Attendance
Attendance at tutorials/seminars is compulsory. Attendance monitoring will take place according to your home institution attendance monitoring policy, or for the core module, according to the policy of the institution hosting the module.

Acceptable reasons for absence include health problems, bereavement and serious personal difficulties.

Traffic delays, attending family celebrations, paid employment or extra-curricular sports activities are normally regarded as unauthorised absence. However, we do consider each case on an individual basis.

For absences other than illness, you must notify your school's administrative office in advance of the absence, or as soon as is practical afterwards.

If you have problems that may prevent you from attending sessions or continuing as a student at any time, talk to your personal tutor or a member of student support staff who will do their best to help you.
If you are unable to attend due to ill health, you should report this using the appropriate method for your home institution.
If you are ill and the absence is for less than 5 working days there is no need to provide medical evidence. However if you are ill for more than 5 working days, **a doctor's medical certificate** should be provided to your local postgraduate administrator.

Leeds – please report illness or absence via the Minerva portal - https://minerva.leeds.ac.uk/
Liverpool – please report illness or absence to your supervisor
Manchester – please report to the Taught Postgraduate Administrator for taught modules or Marie.waite@manchester.ac.uk for research activities.
Sheffield - please see Sheffield handbook for guidance

Remember: it is your responsibility to catch up with missed work, lectures and other academic commitments, please also speak to your supervisors if you are concerned that illness is disrupting the progress of your research.

If you are ill just before or during examinations you should seek written medical confirmation from your GP. Arrangements can be made for students who are ill to take exams in the sick bay and these special circumstances will then be taken into account. In addition, if you have been ill during the year and think that this has adversely affected your studies, or led to an underperformance in your assessed work/exams, you should provide written supportive evidence for the Exam Board. Please speak to your local postgraduate administrator or refer to local guidance for the correct procedure for your Home University.

Assessment

To see how your modules are assessed and to find out the marking criteria, please refer to the individual module details. Students are responsible for knowing and understanding the examination/assessment regulations for the modules chosen. Details of the CDAS 'core' modules are included over the following pages, but please ensure you check the requirements for each module assessment at the beginning of each module.

Extensions must be applied for in the school responsible for teaching your module(s). Processes and guidance for applying will vary between schools, so please contact the school in advance if you think you may need an extension. Extensions for assessed work are not normally given unless there are very exceptional circumstances such as illness or bereavement.

Fails and Re-sits

Candidates who do not pass an examination or assessment at a first attempt will be given an opportunity to be re-examined in the August re-sit period for modules failed in semester 1 or 2.

The teaching school will advise on the required format of the re-sit coursework/examination. All students eligible for re-sits will be sent details of the re-sit opportunities by post and email following the publication of results in July.

If you have not met the requirements of the programme, you will not be allowed to proceed to the next level.

Progression requirements

Year 1:

Students will register as a Postgraduate Research Student and will follow required training and specialised subject modules as well as research study. You will be required to register for 120 credits in year 1 as follows:

Core research skills module(s) (30 credits)
Domain Skills modules:
  ➢ Programming for Social Sciences (15 credits)
  ➢ Understanding Data and its Environment (15 credits)
  ➢ Analysis of Human Dynamics (15 credits)
  ➢ Social Analytics & Visualisation (15 credits)
Internship (15 credits)
Elective module (15 credits)

You will need to complete a Training Needs Analysis at your first meeting with your supervisor to produce an evaluation of outcomes and gaps. This will form the basis for an annual Training Plan.

You should have a minimum of 5 formal supervision meetings and will need to submit a progress report for your first year of research activity. Please note the quantity of research activity done in year one should be equivalent to 60 credits – the emphasis in year 1 is on the taught content.

Students who have met the required standard of academic progression through module assessments and training will be permitted to proceed to registration for year 2.

Year 2:

You will be required to register for 60 credits as follows:
Research Project/Short Dissertation (30 credits)
Elective modules (30 credits)

You should also continue to attend any additional appropriate training according to your Training Plan and have a minimum of 5 formal supervision meetings. The quantity of research activity in year 2 should be equivalent to 120 credits. Towards the end of year 2 you will need to submit a formal progress report for assessment as per your Home University procedures.

Students who have met the required standard of academic progression through module assessments and training will be permitted to proceed to registration for year 3.

Years 3 & 4:

You should have no further assessed modules to take in years 3 and 4, however you should still attend training according to your Training Plan and you should have a minimum of 10 supervision meetings each year. You may also be asked to submit

formal progress reports according to your Home University policy. You should submit your thesis at the end of Year 4. Please note that you will need to submit an 'intention to submit' form 2-3 months prior to submitting.

Please refer to local guidance for Thesis submission guidance:

Leeds: http://ses.leeds.ac.uk/info/20620/research_student_assessment/615/thesis_submission
Liverpool: https://www.liverpool.ac.uk/student-administration/examinations-assessments-and-results/postgraduate-research/submitting-your-thesis/
Manchester: https://www.humanities.manchester.ac.uk/researcher-development/resources/viva/thesis-submission-guidelines/
Sheffield: https://www.sheffield.ac.uk/rs/code/submission

The reuse of assessed work from taught units within the PhD thesis.

In this programme, you will undertake taught units at an MSc level of study as part of your PhD but you do not obtain a separate MSc.

Consequently, you will have more latitude than usual to reuse material from taught work submitted as part of your PhD programme within the PhD thesis itself.

This could happen in two ways:
1) Ad hoc Reuse of material. This would typically happen in one of three ways:
    a. that you refer to some of the same literature in the literature review of research project module in the literature review chapter(s) of the thesis.
    b. Some of the methodology that you develop in the research project (and possibly the Methodology and research design) is reused.
    c. you want in the thesis to describe or refer to the relationship with your project partner and that may naturally lead you to reuse material from your internship report.
2) Use of content from the research project/dissertation in one of the papers in the thesis. The work must be further developed however and not purely resubmitted in its original form.

There are two significant caveats to this:
1) The expectations for the standard of work required for a PhD thesis are higher than the expectations for MSc work. The PhD regulations state that PhD work should be publishable.
2) The rules about self-plagiarism still apply. Please refer to the guidance available at your Home Institution for advice on this.

The key to navigating this is transparency; you should not re-use your submitted work without appropriate acknowledgment. This might mean citing and referencing in the normal way or - in the situation where you choose to reuse the research project report as one of the PhD papers - you should acknowledge that in the (required) section of your introduction where you describe authorship of (and contributions to) the papers. Something like: "an early version of paper 1 was submitted as my research project report during year 2 of my PhD programme" would be appropriate.
If you are in any doubt about this discuss with your supervisory team or the programme director.

Core Module Descriptions

University of Leeds: Programming for Social Science

Module summary

This module provides foundation level skills in computer programming for social scientists. It introduces programming, along with associated introductory techniques for data analysis, visualisation, and modelling. The module will also introduce ancillary themes around good research programming practice, such as version control and licensing.

Objectives
On completion of this module, students should be able to:
➢ To develop core computer programming skills in students.
➢ To develop and awareness of the issues around computer programming.
➢ To develop an understanding of good research programming practice.

Learning outcomes:
➢ Foundation level computer programming for social scientists.
➢ How to build computer analysis and modelling tools.
➢ Practical skills in good research programming.

Skills outcomes:
➢ Abstraction and synthesis of information from a variety of sources.
➢ Solving problems and making reasoned decisions.
➢ Plan, design, execute and report research.
➢ Undertake effective analysis work.
➢ Employ a variety of technical methods for the analysis and presentation of spatial and environmental information.
➢ Apply numerical and computational skills to data.
➢ Use information technology effectively.
➢ Industry knowledge.

Syllabus
➢ Introduction to computer programming.
➢ Variables and Objects.
➢ Flow control and procedures.
➢ Classes and inheritance.
➢ Dealing with data, online and off.
➢ Basic data analysis and modelling.

Teaching methods

Delivery type	Number	Length hours	Student hours
Group learning	1	3.00	3.00
Practical	5	7.00	35.00
Independent online learning hours			21.00
Private study hours			91.00
Total Contact hours			38.00
Total hours (100hr per 10 credits)			150.00

Private study

Students will be given structured online learning materials that supplement the course in a variety of areas of interest to their research. As part of their project for the module, they will be expected to work through at least one set of materials.

Opportunities for Formative Feedback

The practical components will build up software which will be assessed in portfolio form. The projects will be set during the week long teaching period, and then three weeks later will be formatively assessed for progress during a half-day workshop. The final project will be due in some five weeks after this.

Methods of assessment

Assessment type	Notes	% of formal assessment
Project	2,500 word equivalent	70.00
Portfolio	Portfolio of practical work (1,500 word equivalent)	30.00
Total percentage (Assessment Coursework)		100.00

Normally resits will be assessed by the same methodology as the first attempt, unless otherwise stated

University of Manchester: Understanding Data and their Environment

Module manager: Mark Elliot
Email: Mark.elliot@manchester.ac.uk

Please note this module is being reviewed and the content may differ slightly from what is listed below. You will receive an up to date module handbook before the module takes place.

Module summary

This module is a combination of technical and non-technical topics all related to critical externalities to the data analytics process. The primary aim of the module is to demonstrate that data science cannot be carried out in a vacuum that a whole range of extrinsic considerations affect our ability to carry out the research that we wish to carry out. However appropriate management of these externalities can lead to higher quality as well more responsible research.

Objectives

On completion of this module, students should be able to:

- Develop basic understanding of the technical processes of anonymisation, disclosure control and data linkage.
- Develop an awareness of the issues around the use of data in research.
- Develop fundamental skills in data husbandry.

Learning outcomes

- Understand the ethical issues surrounding the use of data in research.
- Understand the concepts and technical vocabulary of anonymisation and statistical disclosure.
- Be able to make informed decisions about linkage/integration of data and carry out a basic data linkage.
- Be able to go through a basic anonymisation process with a dataset.
- Be able to identify an appropriate collection of data sources for a project and to identify the issues in using those data sources.

Syllabus

- Ethics and the law: data protection, anonymisation, statistical disclosure, understanding consent.
- Information about Data: Metadata and Paradata. Provenance and data generating processes. Issues about data quality and the impact on inference. Accessing and finding data.
- Pre-Processing: Understanding data quality and divergence and the impact on inference; Cleaning data; Editing and imputation models.
- Combining and enhancing data: Basics of data linkage/integration.

Teaching methods

Delivery type	Number	Length hours	Student hours
On-line Learning	4	1.00	4.00
Lecture	6	1.00	6.00
Practical	3	6.00	18.00
Seminar	4	1.00	4.00
Independent online learning hours			8.00
Private study hours			110.00
Total Contact hours			32.00
Total hours (100hr per 10 credits)			150.00

Private study

Students will be given structured online learning materials that supplement the course.
They will also be provided with a set of readings covering the four main components of the syllabus, which will also provide

background for the assessed work.

Opportunities for Formative Feedback

Student progress will be monitored through the staff engagement with practical work. Highly interactive seminars and online clinics will allow students to bring questions and practical issues for discussion and feedback.

Methods of assessment

Assessment type	Notes	% of formal assessment
Essay	2000 words	40.00
Project	3000 words	60.00
Total percentage (Assessment Coursework)		100.00

Normally resits will be assessed by the same methodology as the first attempt, unless otherwise stated

University of Liverpool: Data Science Studio

Module manager: Dani Arribas-Bel
Email: darribas@liverpool.ac.uk

Module summary
The two enduring characteristics of many new forms of data concerned with human dynamics are time and location; however, these attributes require special treatment by the social sciences. The content of this module reflects various spatial turns within the social sciences and concerns how techniques of modern spatio-temporal data analytics can be integrated with Data Science tools to solve practical real-world problems.

Objectives
This module seeks to provide students with a robust grounding in those methods enabling the study of human dynamics, providing particular focus on programmatic implementations. The content of this module will enable students to develop a deeper understanding of how new forms of big data with spatio-temporal attributes can be synthesised into useful information when making decisions.

Learning outcomes
- Demonstrate advanced analysis of human dynamics concepts and be able to use tools programmatically to import, manipulate and analyse data in different formats.
- Understand the motivation and inner workings of the main methodological approaches of human dynamics, both analytical and visual.
- Critically evaluate the suitability of a specific technique, what it can offer and how it can help answer questions of interest.
- Apply a number of analysis techniques and how to interpret the results, in the process of turning data into information.
- When faced with a new data-set, work independently using tools programmatically.

Syllabus
A programme of lectures, guided practical classes and independent study will guide students through four main components:

- Concepts and methods for the study of human dynamics
  This first component introduces the student to the general concepts that are relevant to the study of human dynamics, with a practical lab associated with the computational environment and programming software utilized in the rest of the module.
- Visualization and Choropleth mapping
  This part of the course will cover the basic principles in geographic data processing and visualization design, including choropleth mapping. A practical lab will develop computational skills related to map creation from data using programming scripts.
- Exploratory Spatial Data Analysis
  After initial basic visualization, the next step in the process of geodata analysis involves exploring the existence of patterns and associations over space and time. Students will develop knowledge in the main statistical tools to study such distributions as well as how these concepts are encapsulated by state-of-the-art software programming packages.
- Making decisions
  When attempting to make optimized choices from a given set of options, problems are often multi-dimensional, dynamic and spatially varying. Through a practical class students will develop methodological skills that reduce such complexity, highlighting salient patterns within data.

Teaching methods

Delivery type	Number	Length hours	Student hours
Practicals	5	7.00	35.00

Group learning	1	3.00	3.00
Independent online learning hours			21.00
Private study hours			91.00
Total Contact hours			38.00
Total hours (100hr per 10 credits)			150.00

Private study

Students will be set computer based tasks in practicals that will take longer than the timetabled practicals to complete. They will have to access on-line resources to which they will be directed, for support

Opportunities for Formative Feedback

The practical components will build up skills which and students will be given the opportunity to test their learning in class. The projects will be set during the week long teaching period, and then will be formatively assessed for progress during a half-day workshop 2 or 3 weeks later.

Methods of assessment

Assessment type	Notes	% of formal assessment
Essay	Equivalent to 5,000 words	100.00
Total percentage (Assessment Coursework)		100.00

Normally resits will be assessed by the same methodology as the first attempt, unless otherwise stated

University of Sheffield: Social Analytics & Visualisation

Module manager: Gwilym Pryce
Email: g.pryce@sheffield.ac.uk

Module summary

This module will introduce machine learning, cluster analysis, social network analysis, textual analysis and data visualisation. The course will emphasise methods that can be applied to real-world applications. Employable skills include techniques for analysing large complex datasets in non-standard ways. A programme of lectures, guided practical classes and independent study will help develop a set of hands-on practical skills useful for social science applications. Students will undertake a small secondary data analysis project for assessment.

Objectives

➢ Introduce students to methods for data analytics and data visualisation and help them learn how these techniques can be employed in social science research;
➢ Enable students to critically assess the validity, strengths and limitations of different data analytical and visualisation methods;
➢ Give students knowledge of specific techniques employed in social analytics;
➢ Teach students how to apply techniques for data analytics and visualisation using the statistical programming software R and other appropriate packages;
➢ Develop good report writing and critical analytical skills.

Learning outcomes

➢ Be familiar with advanced methods of social analytics including machine learning, cluster analysis, social network analysis, sentiment analysis and data visualisation, and have a crtical/reflective understand of how these can be used in social research;
➢ Be able to undertake secondary data analysis to answer research questions and have a broad knowledge of the fundamentals of designing a social science research project that involves data analytics and visualisation;
➢ Be familiar with how to undertake appropriate analysis using relevant software packages;
➢ Demonstrate good analytical and report writing skills.

Teaching methods

Delivery type	Number	Length hours	Student hours
Practical	10	3.50	35.00
Independent online learning hours			115.00
Private study hours			0.00
Total Contact hours			35.00
Total hours (100hr per 10 credits)			150.00

Private study

Students will be given structured learning materials that supplement the course in a variety of areas of interest to their research.

Opportunities for Formative Feedback

The practical components will build up skills which and students will be given the opportunity to test their learning in class. The projects will be set during the week long teaching period, and then will be formatively assessed for progress during a half-day workshop 2 or 3 weeks later. The final project will be due in some five weeks after this.

Methods of assessment

Assessment type	Notes	% of formal assessment
Essay	4000 word equivalent	100.00
Total percentage (Assessment Coursework)		100.00

Normally resits will be assessed by the same methodology as the first attempt, unless otherwise stated

Training

Researcher skills training and development

In addition to the training you will receive on the Masters programme you will need to attend other training as part of the whole programme, and as the CDT projects are classed as 'Advanced Quantitative Methods' (AQM) projects, you will need to be able to demonstrate that you have attended advanced training and how these have impacted on your research project development.

Developing personal and professional skills is an important part of the postgraduate research degree. A PhD is no longer purely about getting on with your research and publishing the findings - though these will remain the key focus. A PhD in the UK now also places importance on developing you and your skills - as a researcher and an individual – to become more effective in your research, and to enhance your future employability whether this is inside or outside academia. It can be helpful to divide skills into two categories – "research-specific" and "transferable" skills, although in reality the distinction between these two categories is blurred.

Research-specific skills are, as implied, usually very specific to your research project area, such as subject knowledge, research methodology, experimental techniques and health and safety. This will at least partly be covered by your training as part of the MSc programme, in the core skills and the elective modules you choose to take. You may also choose to sit in on further modules later in the programme if you and your supervisory team feel it is appropriate.

Transferable or generic skills, e.g. writing and presentation skills, project management skills, IT skills etc. all help you to perform your research effectively and efficiently, and also contribute to your future employability. Transferable skills are just as important as research-specific skills, and there has been significant investment by the UK Research Councils (RCUK) to provide suitable development opportunities for PhD students within the University of Leeds.

Training and Development Needs Analysis This is a process by which an individual can manage their own development through a process of reflection and structured planning on how they can meet their own goals, in order to help you to understand what skills and competencies you could be building. A survey link will be sent to you at the beginning of each academic year to complete, you will also need to include this information for your Home University (please see links below).

Leeds - https://research.leeds.ac.uk/do/leeds-auth/login
Liverpool - https://www.liverpool.ac.uk/pgr-development/
Manchester - http://www.socialsciences.manchester.ac.uk/research/
Sheffield - https://www.sheffield.ac.uk/smi/postgraduate/ddp

Training Plan All students must undertake a review of the training they have had to date and any future training needs and this should ideally be done after a training needs analysis. This should be done in the first month of your PhD in consultation with your supervisors and should be discussed at review meetings and formal progress points during the programme.

For more information about national transferable skills for PhD students see the Vitae RCUK Researcher Development Framework. https://www.vitae.ac.uk/researchers-professional-development/about-the-vitae-researcher-development-framework. Details of different bodies which provide training for PG Researchers are listed below.

White Rose Social Sciences Doctoral Training Partnership and North West Social Science Doctoral Training Partnership

The Centre spans two ESRC-funded Doctoral Training Partnerships; Leeds and Sheffield, are part of the White Rose DTP and Manchester and Liverpool are part of the North West DTP. You are welcome and encouraged to make use of training and networking opportunities offered by the partnerships.

Consumer Data Research Centre

The CDRC is an ESRC funded Research Centre which brings together world-class researchers from the University of Leeds, University College London, University of Liverpool and the University of Oxford to offer a range of expert services to a wide range of users.

Timetable for Research Activities and progress points

University of Leeds	University of Liverpool	University of Manchester	University of Sheffield
Complete Training Needs Analysis, Training plan, Partner Reporting Plan and Budget Plan *Month 1 (and update annually)*	Complete DNA, TAP, PhD plan, Partner Reporting Plan and Budget Plan *Month 1 (and update annually)*	Complete Researcher Development form, Partner Reporting Plan and Budget Plan. *Month 1 (and update annually)*	Complete Training Needs Analysis, Training plan, Partner Reporting Plan and Budget Plan *Month 1 (and update annually)*
First formal progress report *To be completed in Grad by 9 months*	First formal progress report *8-9 months*	Expectations *Month 3(and update annually)*	First formal progress report *8-9 months*
	1st Conference presentation & IPAP (independent progress assessment panel) & APR within Tulip *9-10months*	Annual review (Annual review form) *Month 9*	Formal progress meeting *12 months*
Progress report (pre-transfer stage) and transfer viva (RSG2) *18-24 months*	2nd Conference presentation & progress report, IPAP & APR within Tulip *21 months*	Annual meeting (Annual review form) *Month 21*	Formal progress meeting *20-24 months*
Annual progress review meeting *36 months*	3rd progress report, IPAP & APR within Tulip 33 months	Annual meeting (Annual review form) *Month 33*	Annual progress review meeting *36 months*
Annual progress review meeting *48 months (if not submitted)*	4th progress report, IPAP & APR within Tulip *45 months (if not submitted)*	Annual Review (Annual review form) *Month 45*	Annual progress review meeting *48 months (if not submitted)*
Thesis submission and final viva *48 – 60 months (max)*	Thesis submission and final viva *48 – 60 months (max)*	Thesis submission and final viva *60 months (max)*	Thesis submission and final viva *48 – 60 months (max)*

Ethics

The Research Councils and the Universities have laid down requirements that all University research with ethical implications must have ethical approval from a University Research Ethics Committee before the research can start.

Ethical review is not about preventing or making it difficult to carry out research, but about helping you as the researcher think through the ethical issues and how to deal with them.

If your research involves human participants or their data, for example if you are going to be conducting interviews, surveys or observing people then you will need to apply for ethical review. If in doubt, you should speak to your supervisors and your local ethics team.

University of Leeds
http://students.leeds.ac.uk/info/10112/research_degrees/910/research_student_guidance and
www.leeds.ac.uk/ethics

University of Liverpool
https://www.liverpool.ac.uk/research-integrity/ - Your supervisor will be able to provide further information.

University of Manchester
http://www.humanities.manchester.ac.uk/pgr-handbook-soss/policies/research-ethics/

University of Sheffield
https://www.sheffield.ac.uk/rs/ethicsandintegrity

Finance

The CDT funding is for one year in the first instance, and renewable subject to satisfactory progress. The funding is provided for 4 years, covering fees, maintenance (stipend) and research training costs. It does not provide funding for the fifth "overtime" year so it is important to bear in mind that there is a fee of around £200-£400 for this year. You will need to budget for this and any maintenance costs if you go into your overtime period.

Stipend

The National Doctoral Stipend for 2020-21 is £15,285. This will be paid in monthly or quarterly payments in advance directly into your bank account, subject to you completing registration. For quarterly payments, the expected dates of payment will be 1st October, 1st January, 1st April and 1st July each year.

Research Training Support Grant (RTSG)

You will incur expenses carrying out your doctoral research; these will vary in the amount and type of expense depending on the research you are undertaking. You may need to fund field work, surveys, secondary data purchase, laboratory analysis or the use of external facilities such as high speed computing. You are strongly encouraged to participate in academic meetings, conferences and workshops and to present your findings and you may also need to attend university-run or external training courses, which may incur some expense. With this in mind postgraduate students are provided with a Research Training Support Grant (RTSG).

This allowance is intended to be used to pay for expenses which the student and supervisor deem to be in direct support of a student's research and training. Examples are:
  (i)   UK and overseas fieldwork expenses;
  (ii)   (ii) UK and overseas conferences and summer schools;
  (iii)   (iii) Language training courses usually undertaken in the UK prior to an overseas fieldwork trip;
  (iv)   Reimbursement of interpreters, guides, assistants;
  (v)   Survey costs, e.g. printing, stationery, telephone calls;
  (vi)   Purchase of small items of equipment for example cameras, tape recorders or telephone and photocopying facilities in their outlet (some small items may be available to hire from your School).
  (vii)   Books essential for your research.

In exceptional circumstances, the Centre may consider requests for the purchase of 'equipment' from this allowance. Any such request must be clearly and adequately justified based on the nature of the research being undertaken and as being essential for the successful completion of the PhD. In these instances, any equipment purchased worth in excess of £200 will remain in the custody of the University following completion. Students may only claim from their RTSG during their funded period of study (i.e. when maintenance and fees are paid) and not during the writing up period. Students should note that they also cannot pay in advance from their RTSG for activities/items taking place after the end of the standard funding period. Overtime fees cannot be paid from your RTSG account. The funds for RTSG are pooled at a Centre level, however as a guideline we would expect students to spend up to £750 in any one year. There is further information on how to use your RTSG here https://datacdt.org/current-students/

Agreeing your budget

In the month after arrival, each student should discuss their funding arrangements with their supervisor(s). A budget for your research costs must be prepared on the budget pro- forma (available on the CDT website https://datacdt.org/current-students/). Please provide a signed copy for the form to the Centre Manager

(datacdt@leeds.ac.uk) by the end of your first month of study. You should continue to review this budget through the course of your degree.

Travel to modules not at your 'home institution'

You can reclaim the cost of travel to the core modules hosted at other institutions. The mode of travel should be based on availability, timing and cost. The most cost efficient manner should be used wherever possible, whilst considering safety and environmental impact. Accommodation will be provided for students attending modules not at their 'Home University' and will be booked by the centre. Some catering will be provided during the course and you can claim the cost of evening meals for nights away from home up to a limit of £10 per day.

Widening Participation funds and Funding in exceptional circumstances

A Widening Participation pot is available for students to apply to in order to cover additional costs incurred due to caring responsibilities or to cover unexpected expenditure that cannot be covered from elsewhere. This fund cannot be used to cover general living expenses, research costs, University fines or debt.

Examples could include:
- Costs to cover childcare/ care of any dependants while students are required to work away from their home institution (such as during core modules, conferences, internship etc.)
- Extra allowance for students with a disability to cover taxi fares/accessible hotel rooms/assistance to attend core modules

The fund does not cover:
- Costs to cover childcare/ care of any dependents while students are working at their home institutions
- Any expenses claimed in retrospect which haven't been approved by the Centre Manager
- Costs which would other be covered by a DSA allowance

Applications for funds from the Widening Participation pot should be made to the Centre Manager using the Widening Participation Fund form available here - https://datacdt.org/current-students/

Typical Travel Times between institutions

 http://www.nationalrail.co.uk/

From	To return	How long – single journey	Cost return (on the day)
Leeds	Liverpool	1hr 50	£30 - £45
Leeds	Manchester	1hr (up to 1hr 30 by slow train)	£20 - £30
Leeds	Sheffield	40 minutes to 1hr 15	£11 - £18
Liverpool	Manchester	45 minutes to 1hr 15	£15 - £20
Liverpool	Sheffield	1hr 45 to 2hr 15	£36
Manchester	Sheffield	50 minutes to 1hr 15	£18 - £22

From	To	Allow	
Leeds rail station	LIDA (Level 11 Worsley building)	20 mins	Train station to LIDA map
Liverpool Lime Street	Geographic Data labs	20 mins	Train station to Geographic Data Labs map
Manchester Piccadilly	Roscoe Building	20 mins	Train Station to Roscoe Building map
Sheffield rail station	Interdisciplinary Centre of the Social Sciences (ICoSS)	20 mins	Train station to ICoSS map