

Title:	Code of Practice for Research
Approved by:	Academic Board
Implementation date:	April 2019

CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
1	Context and Applicability	2
2	Personal and Professional Research Integrity	3
3	Research Funding	6
4	Research Data	6
5	Use of Student Related Data for Research Purposes	7
6	Research Authorship and Collaborative Working	7
7	Research Publications	9
8	Training and Development of Researchers	10
9	Research Misconduct	11
10	Ethical Requirements	12
11	Health & Safety	15
12	Reporting Breaches of the Code of Practice	16
13	Document Governance and Control	16

1 Context and Applicability

- 1.1 At Nottingham Trent University (NTU) research that shapes lives and society is central to our mission and the achievement of our aims.
- 1.2 We value what research is, what it does and we aim to support those who undertake it.
- 1.3 In keeping with our commitment to support staff and students in their ambitions to undertake excellent research, we operate a *Code of Practice for Research*. The code, set out below, provides the principles of practice and conduct by which the University expects research to be carried out either at or in the name of NTU.
- 1.4 The *Code of Practice for Research* at NTU aligns with and should be read alongside the Research Councils' UK *Policy and Guidelines on Governance of Good Research Conduct* (2013), available at:
<https://www.ukri.org/files/legacy/reviews/grc/rcuk-grp-policy-and-guidelines-updated-apr-17-2-pdf/>
- 1.5 The *Code of Practice* is relevant to all individuals involved in research either at or in the name of NTU, irrespective of the discipline/field of research.¹ This includes:
 - 1.5.1 Academic staff;
 - 1.5.2 Staff employed on research contracts;
 - 1.5.3 Students and their supervisors;
 - 1.5.4 Technical staff involved in research support;
 - 1.5.5 Visiting students and their supervisors;
 - 1.5.6 Visiting and emeriti researchers/scholars;
 - 1.5.7 Research managers; and
 - 1.5.8 Professional Support Service staff.
- 1.6 For the purposes of this *Code of Practice* we use the definition taken from the OECD Frascati Manual, a summary of which is available below. The full definition can be found [here](#).

Research and experimental development (R&D) comprise creative and systematic work undertaken in order to increase the stock of knowledge - including knowledge of humankind, culture and society - and to devise new applications of available knowledge.
- 1.7 Where legislation is referred to in this document, it is necessarily that governing research in England. Legislation for Wales, Scotland and Northern Ireland may differ, as will legislation for other jurisdictions worldwide. Where research is

¹ The term "researcher" will be used throughout the Code as a general term to cover all individuals undertaking research at or in the name of NTU.

being carried out, in whole or in part outside England, care should be taken to comply with local law, if necessary, by taking advice from local institutions.

2 Personal and Professional Research Integrity

- 2.1 The primary responsibility for safeguarding the integrity of any research undertaken lies with the individual researcher. All researchers are expected to meet the standards laid down by the funding bodies, the University and relevant professional bodies. Principles of good practice to which researchers are expected to adhere:
- 2.2 Honesty, openness and rigour
 - 2.2.1 Maintaining open, honest and rigorous professional standards is fundamental to research and the University expects researchers to foster a culture of honesty, openness and rigour across all stages of the research process, from applying for funding to publishing outcomes and acknowledging contributions from colleagues.
 - 2.2.2 Research design, methodologies and results should be open to scrutiny, discussion and debate. Researchers should be as open as possible with other researchers and the public about their work subject to confidentiality restrictions.
 - 2.2.3 After any findings have been published, all data and materials used in obtaining those results should be made available to other researchers as and when required and subject to any contractual or other confidentiality restrictions (see NTU Research Data Management Policy).
- 2.3 Accountability and responsibility
 - 2.3.1 All researchers should be aware of the legal and policy requirements that regulate their work. This includes a responsibility to comply with the law, guidelines produced by the University and research practice guidelines produced by relevant professional bodies and other appropriate bodies.
 - 2.3.2 All researchers must ensure the work undertaken is consistent with the agreements and terms and conditions defined by the University and/or the research sponsor. This includes ensuring the project is carried out as defined in the original proposal; the finance is used solely for the purpose it was intended; reports are accurate and produced on schedule and that there is adherence to any conditions regarding publication and intellectual property ownership. Failure to adhere to these guidelines could be considered professional misconduct under the University's research misconduct policies.
 - 2.3.3 Research requires a commitment to the careful, reflective process of discovery and interpretation. All research results should be checked before publication. Despite the various pressures and deadlines imposed, Researchers should not lose sight of the need to question the findings of their research, as ideas and results may be challenged once published.
 - 2.3.4 Wherever possible both research design and delivery should be developed in a way that minimises negative environmental or sustainability impacts.
- 2.4 Project application and approval

- 2.4.1 All applications for externally-funded research should be signed off by an authorised signatory at School, College or University level in accordance with the University Authorities Manual.
 - 2.4.2 Prior to submission to an external funder, all research applications must be reviewed by the Research Office who will facilitate the checking of the pricing and costing and overall business case for the proposal.
 - 2.4.3 Researchers are advised to discuss proposed projects with the relevant Associate Dean for Research and Research Office at the earliest opportunity in order to ensure that applications and proposals are properly costed and comply with any applicable terms and conditions.
 - 2.4.4 Prior to submission to an external funder, all research applications should have passed a proportional internal grant review process to ensure they are of the highest quality possible.
- 2.5 Conflicts of interest
- 2.5.1 For the purposes of research a conflict of interest has been defined as “a set of circumstances that creates a risk that professional judgment or actions regarding a primary interest will be unduly influenced by a secondary interest². In research terms, a conflict of interest might arise whereby an actual, potential or perceived conflict exists that causes undue influence over judgement(s) associated with the undertaking of or reporting results from a research project.
 - 2.5.2 The initial responsibility for managing conflicts of interest lies with the individual researcher. The fundamental requirement for managing conflicts of interest is that all researchers should disclose conflicts of interest, whether actual or potential, as soon as they become apparent. Any disclosure of this nature should be made to the relevant Dean of School and the individual concerned will then comply with their direction. When addressing a conflict of interest, it must be decided whether it is of a type and severity that poses a risk of fatally compromising the validity or integrity of the research, in which case researchers and organisations should not proceed with the research, or whether it can be adequately addressed through declarations and/or special safeguards relating to the conduct and reporting of the research.
 - 2.5.3 If external partners or funders are involved they should be notified at the earliest appropriate opportunity. If in doubt, it should be considered best practice in the first instance to disclose any actual or potential conflicts of interest and seek advice from the appropriate School Associate Dean for Research.
- 2.6 Leadership responsibilities
- Individual researcher responsibility:
- 2.6.1 The primary responsibility for safeguarding the integrity of any research undertaken lies with the individual researcher.
- Institutional responsibility:
- 2.6.2 It is the responsibility of the Vice-Chancellor, Deputy Vice-Chancellor for Research and Innovation, Heads of Colleges, Deans of Schools and Associate Deans of Research to ensure that a culture of good practice in

² See Lo and Field (Eds), National Research Council. *Conflict of Interest in Medical Research, Education, and Practice*. Washington, DC: The National Academies Press, 2009.

research is fostered throughout the Institution. Leaders of research themes, centres and groups also have responsibilities in this regard.

Research leader responsibility:

- 2.6.3 Research theme, centre and group leaders, principal investigators and research student supervisors etc. are expected to create an atmosphere of openness and co-operation within his/her team, fostering the open exchange of ideas and ensuring that robust management practices exist to safeguard the honesty and integrity of the research conducted. New researchers (including research students attached to the group) must be given access to this *Code of Practice*, the *NTU Research Ethics Policy & Procedure* and any other appropriate guidelines.
- 2.6.4 Principal investigators/research supervisors must endeavour to ensure that researchers for whom they have responsibility are not placed under commercial or other pressures that prevent the normal pursuit of thorough and honest investigation.
- 2.6.5 The principal investigator of a research project bears primary responsibility for all aspects of the research undertaken. This includes ensuring:
 - 2.6.5.1 the dignity, rights, welfare and safety of any research participants;
 - 2.6.5.2 that research is conducted in accordance with guidelines (including best practice and health and safety procedures) and approval obtained from all necessary bodies before research commences (with any proposed amendments to the agreed protocol also being approved);
 - 2.6.5.3 the study complies with all relevant legal and ethical requirements (see *NTU Research Ethics Policy and Procedure*);
 - 2.6.5.4 each research team member is sufficiently qualified and experienced to fulfil their role. This includes ensuring that new and early career researchers have adequate supervision, support and training;
 - 2.6.5.5 procedures are in place to collect, store and protect data (and its integrity and confidentiality) and that it is appropriately archived upon completion of the research (see *NTU Research Data Management Policy*);
 - 2.6.5.6 reports on research progress and outcomes are produced on time and to an acceptable standard;
 - 2.6.5.7 research results are disseminated promptly and fed back as appropriate to participants;
 - 2.6.5.8 findings are, subject to confidentiality constraints, open to review through accepted scientific and professional channels;
 - 2.6.5.9 arrangements are in place to manage financial and other resources provided for the study and any intellectual property arising;
- 2.6.6 Ensuring the prevention and detection of any misconduct by adopting the role of guarantor on published outputs.

Committee responsibility:

- 2.6.7 The University Research Committee will provide strategic oversight and leadership of NTU research and the ecosystem which supports it.

3 Research Funding

- 3.1 It is the University's position that research funding should not be accepted in cases where researchers do not have the freedom to conduct their work in accordance with normal scientific and research conventions (including those entered into under NTU approved collaborative and/or contract research agreements), which includes publication of results.
- 3.2 In interpreting clause 3.1 it is noted that in some cases ownership of the data and any ensuing Intellectual Property (IP) is assigned to the sponsor or funder as a condition of the grant or contract, for example Knowledge Transfer Partnerships (KTPs) and other commercial collaborations. In such cases it is incumbent on the researcher to familiarise themselves with the terms of the contract and to seek any necessary permissions from the sponsor or funder in advance of any submission of the work to a publisher.
- 3.3 In addition to the above, and where there is any doubt concerning the suitability of the funder for research at NTU the decision on whether the funding should be accepted rests with the University Executive Team (UET) or its nominee(s).
- 3.4 It is incumbent on those staff authorising research funding applications on behalf of NTU that they consider the proposed funder for the research and if in any doubt about the funder's suitability the matter should be raised with the UET *via* the Deputy Vice Chancellor for Research and Innovation prior to any authorisation being given.

4 Research Data

- 4.1 Researchers must comply with NTU's *Research Data Management Policy* available at:
https://www4.ntu.ac.uk/staffnet/document_uploads/160077.pdf
and also with NTU's Document Retention schedule available at:
https://www.ntu.ac.uk/_data/assets/pdf_file/0029/584282/ntu-records-retention-schedule.pdf
- 4.2 Researchers have a duty to comply with all the requirements of current data protection legislation. All processing of personal data must comply with the terms of the *Data Protection Act 1998*, *General Data Protection Regulation 2016* or equivalent for research conducted outside the UK. Researchers should refer to the NTU's guidelines on Data Protection.
- 4.3 Research data should be kept for the legally specified period or otherwise three years from the end of the project.
- 4.4 A key principle of good research practice is the meticulous recording and retention of research data. Researchers are expected to keep clear and accurate records of all results obtained including primary data, interim results and final outcomes, as well as the procedures followed and approvals granted. The retention of research data is crucial both for good research practice but also to facilitate reproducibility of research should questions arise on any conclusions drawn from the data in question.

- 4.5 Data should be stored securely and durably in a paper and/or electronic format, as appropriate. For data stored on a computer a back-up should always be kept. Note that the research sponsor may require a longer period of retention.
- 4.6 Wherever possible, it is best practice to anonymise the data by removing any identifying information from it.

5 Use of Student Related Data for Research Purposes

- 5.1 The collection, analysis and use of student-related data³ for purposes of (i) improving and enhancing the student learning experience and (ii) provision of information to any government or regulatory body (for example Research England and the Higher Education Statistics Agency (HESA), has been undertaken across the University for many years and is considered to be part of the normal business of the University.
- 5.2 In addition to this type of activity, whereby student-related data is collected and used for student enhancement and regulatory purposes, University staff may also wish to collect and use it for research-oriented purposes (for example pedagogic research resulting in conference papers and/or academic journal articles) or for activities which may or may not lead to research-oriented endeavours (for example course evaluation and promotion, course performance improvement).
- 5.3 As part of its commitment to (i) promote staff in their ambitions to undertake excellent research and (ii) continue in its endeavours to improve and enhance the student learning experience, the University is supportive of the collection and use of student-data for research-oriented purposes. It is, however, expected that University staff embarking upon any research project of this nature adhere to NTU's *Code of Practice for Research and Research Ethics Policy and Procedure*.
- 5.4 Staff who wish to undertake research that includes the use of student-related data are advised to speak initially with the relevant Associate Dean for Research or Chair of the appropriate Research Ethics Committee.
- 5.5 While the Student Enrolment Document, Student Charter and Student Data Protection Notice allow for data collected from students to be used for a variety of purposes, there are a number of caveats to this that first need to be considered before commencement of any research projects.

6 Research Authorship and Collaborative Working

- 6.1 Authorship is the foremost method of allocating credit for intellectual advances and as such it is important within the context of good practice in research. The University expects that anyone listed as an author on any form of published output⁴ arising out of research accepts personal responsibility for ensuring they are familiar with the contents of the output.
- 6.2 An author can be defined as someone who has had a major input into the creation of an output from a research project. This can be by:

³ For example, data relating to student numbers, course performance, marketing evaluation, etc.

⁴ An output is defined as any form of publication (e.g. journal article, book, book chapter, monograph, thesis, research report) or any other published artefact created as a result of the undertaking of research.

- 6.2.1 helping conceive the research project and its procedural framework;
- 6.2.2 being involved in the research project and the interpretation of research data associated with the project;
- 6.2.3 drafting/creating the output, or revising its content in a critical manner.

Note that these three conditions are not mutually exclusive and we would typically expect that authors have contributed to an output by being involved at more than one of these phases of a research project.

Giving the ultimate approval for the final version of the output to be published would not be considered adequate grounds for inclusion as an author of a research output in its own right. The provision of such approval, in addition to a researcher being involved in other phases of the research project, would typically be expected before a researcher is included as an author on any output arising from the research project.

- 6.3 It is expected that the roles and contributions of collaborators and other supporters of the research projects will be acknowledged within any published outputs. This extends to acknowledging the support from the research sponsor, if it is appropriate to do so. This should apply when publishing research findings and whenever making a statement regarding the research. Failure to properly acknowledge all direct or indirect contributions made by collaborators and other supporters is likely to be viewed as unprofessional conduct.
- 6.4 As a rule, an author's input into the actual research must be sufficient for them to take responsibility for part of the output. Assisting in acquiring funding or data is not enough to earn the title of author. Neither is general supervision of a research team or research student. Contributions of this kind should be acknowledged in the text, but not as authors. The practice of honorary authorship is not acceptable.
- 6.5 Every author involved in a project should review its output before it is published and ensure that he/she is familiar with its contents and their contribution to it. Once published he/she should support the findings of the research. Any person listed on an output as an author or co-author is taken to endorse every part of that output.
- 6.6 As a general rule it is considered good practice for researchers involved in a research project to discuss and make decisions about authorship of any potential publications arising from the project at the start of the project. It is advisable to record decisions made in writing, with copies held by each researcher involved in the project.
- 6.7 Researchers should be aware that submitting research reports to more than one potential publisher at any given time (i.e. duplicate submission) or publishing findings in more than one publication without disclosure and appropriate acknowledgement of any previous publications (i.e. duplicate publication) is unacceptable.
- 6.8 Researchers who are discouraged from publishing and disseminating their research or its findings, or subjected to attempts to influence the presentation or interpretation of findings inappropriately, should discuss this with their School ADR in the first instance.
- 6.9 Research is increasingly collaborative, involving individuals from different disciplines and from institutions within and beyond the UK. In establishing research collaborations researchers should be mindful of the University's policies and guidelines, as well as funder, legal and regulatory requirements, and ensure that research partners and their employing institutions are able to

meet the required standards of research conduct. There needs to be clear agreement on and articulation of the standards and frameworks that will apply to collaborative work. This is particularly important in relation to the provenance of intellectual ideas and ownership of research outcomes as well as the specific conditions under which these may be shared. All parties should be clear about their respective roles and responsibilities within the collaboration, which should be set out in any formal collaboration agreement. Guidance on research integrity in collaborative research is provided by the Montreal Statement on Research Integrity in Cross-Boundary Research Collaborations.

- 6.10 Key issues to consider with regard to developing collaborative working include: responsibilities of each collaborator, governance of the project, resource-sharing, disclosure of conflicts of interest, how data should be collected, stored and shared, authorship, financial management, how issues of IP will be addressed, requirements for training and supervision of PGR students, compliance with funder and regulatory requirements and estimated timescales for the project.

7 Research Publications

- 7.1 Online guides and documents concerning the NTU Publication Strategy, Open Access publishing and submitting publications to the University Repository (IRep) are available from the Library website, at: http://www4.ntu.ac.uk/library/research_support/index.html and all researchers are expected to familiarise themselves with these documents.
- 7.2 In addition, some general principles on research publishing that researchers are expected to adhere to are:
- 7.2.1 Research results should be disseminated widely in an appropriate form, e.g. as papers in refereed journals, subject to confidentiality restrictions (for example, in confidential reports produced in contract research). Publication allows the community at large to view, challenge and develop research results. All publications should contain enough information to allow other researchers to replicate the procedures originally used. Precise reference should also be made to all significant contributions including, where appropriate, the financial support received.
- 7.2.2 Research of suitable quality should be published wherever possible, although timed so as to protect any intellectual property or confidential information. It is important that research output is peer reviewed through accepted scientific and professional channels.
- 7.2.3 Exceptions to the standard rule of first publishing through accepted scientific and professional channels would be when serious public health or safety issues are involved or in cases of contract research. The safety of the general public would take precedence in these instances. It follows from this that healthcare research findings in particular must be published as soon as possible. An explanation of the findings must be made available to the public in an understandable format.
- 7.2.4 Researchers have a duty to publish the findings of all clinical research involving human participants. In addition, it is government policy to promote public access to information about any research and research findings affecting health and social care, including the principle that trials should appear on public registers. In this context "trials" means all comparative studies of health interventions, not just ones conducted in a clinical setting.

- 7.2.5 Generally speaking, authors should not publish more than one paper based on the same set of data. An exception to this is where researchers are using publically available data sets and they are taking different approaches and/or novel ways of undertaking data analyses. In all cases, there must be full and thorough references and acknowledgements to the earlier paper(s) using the same data sets.

8 Training and Development of Researchers

- 8.1 It is the responsibility of the University to ensure that there are adequate provisions for training and development to enable all research students and staff to acquire necessary research skills for their current role, and to support their future career development.
- 8.2 The University supports the principles of the Concordat to Support the Career Development of Researchers, a UK-wide agreement launched in 2008 to promote research careers and improve research for the benefit of UK society and the economy. In addition the University holds the EU HR Excellence in Research award, as an indication of its commitment to supporting the careers of researchers. Information about the University's commitment to the Concordat is available at:
<https://www.ntu.ac.uk/research/research-environment-and-governance/support-for-researchers-at-NTU>
- 8.3 Research group leaders/principal investigators/supervisors are expected to provide adequate supervision to staff and student researchers in their charge, along with regular reviews of progress.
- 8.4 The identification of training and development needs and the provision of careers advice constitute key components of the University's annual Appraisal cycle (for staff) and Annual and Interim Monitoring (for research students).
- 8.5 It is vital that research leaders/supervisors develop the appropriate skills in respect of their staff development and managerial responsibilities. To this end the University has developed a Researcher Continuing Professional Development (Researcher CPD) tool⁵, available at:
<https://now.ntu.ac.uk/d2l/home/279569>
- 8.6 Research training and development for research students (and staff, where appropriate) is coordinated by the NTU Doctoral School and students/staff looking for information about the Doctoral School training and development should refer to web information and documents provided by the Doctoral School available at:
<https://www.ntu.ac.uk/research/research-degrees-at-ntu/doctoral-school>
- 8.7 Research Training and development for staff (and research students, where appropriate) is provided by the University and information about training and developmental opportunities can be found on the University research web pages
<https://www.ntu.ac.uk/research/research-environment-and-governance/support-for-researchers-at-NTU>

⁵ Based on Vitae's *Researcher Development Framework* (see: <https://www.vitae.ac.uk/researchersprofessional-development/about-the-vitae-researcher-development-framework>).

- 8.8 Training in relevant research related skills may also be provided at School or Research Centre/Group level.
- 8.9 In addition to undertaking formal skills training, researchers should be given the opportunity to become involved in wider research activities that contribute to their career development, such as conference attendance, wherever practicable.

9 Research Misconduct

- 9.1 The University is committed to maintaining the highest standards of research integrity in both the practice and publication of research.
- 9.2 Misconduct in research includes, but is not limited to:
 - 9.2.1 Fabrication;
 - 9.2.2 Falsification;
 - 9.2.3 Misrepresentation of data and/or interests and/or involvement;
 - 9.2.4 Plagiarism;
 - 9.2.5 Failure to follow accepted procedures or to exercise due care in carrying out responsibilities for avoiding unreasonable risk or harm to humans, animals used in research or the environment; and
 - 9.2.6 The improper handling of privileged or private information on individuals collected during the research.
- 9.3 There are many ways in which research misconduct can be committed, ranging from minor misdemeanours, which may or may not be inadvertent, to serious acts of deliberate deception.
- 9.4 Misconduct relating to research is unacceptable and may result in disciplinary action for:
 - 9.4.1 All academic staff, contract researchers, visiting researchers/emeriti/scholars, research managers and professional support staff. NTU *Disciplinary Policy and Procedures* and associated guidance documents are available at:
https://www4.ntu.ac.uk/staffnet/quick-links/a-z/central_a-z_listing.html
 - 9.4.2 For allegations of research misconduct relating to students see the *Procedure for Investigating Alleged Research Misconduct*, available at:
https://www4.ntu.ac.uk/adq/document_uploads/quality_handbook/189_265.pdf
 - 9.4.3 Information on reporting instances of research misconduct can be found in the procedures referenced in the above point.
 - 9.4.4 The consequences of research misconduct can be widespread and extremely serious. It can lead to a loss of reputation on the part of the researcher involved (and of the complainant, if the allegation is deemed to be vexatious), a loss of funding (both current and future) for research projects and, potentially, dismissal (or permanent exclusion in the case of research students). Research misconduct may also amount, for staff

and/or research students, to professional misconduct, leading to discipline by their own professional body.

- 9.4.5 The School involved and the University as a whole will also suffer in various ways, including:
- 9.4.5.1 damage to their reputation(s);
 - 9.4.5.2 funding bodies choosing to transfer their money elsewhere, or being less disposed towards giving major grants to the School/University in the future;
 - 9.4.5.3 valuable partnerships being lost e.g. with industry or an NHS Trust;
 - 9.4.5.4 a loss of staff and difficulty in attracting leading academics;
 - 9.4.5.5 the potential for the institution to be sued or prosecuted as a result of the nature of the misconduct.
- 9.4.6 It is therefore essential that all actual or suspected cases of misconduct are dealt with, and are seen to be dealt with, as swiftly and as rigorously as possible.
- 9.4.7 Good practice in research includes reporting concerns about the conduct of research. Researchers are expected to do so, wherever they encounter it. They are also expected to co-operate with any investigation of misconduct in research when requested. Researchers should work with their institution to support those who raise concerns in good faith about the conduct of research and those who have been exonerated of suspected misconduct.

10 Ethical Requirements

- 10.1 The University requires that researchers who are leading, managing and/or supervising research projects consider the associated social and ethical implications of all their research projects, and during the formulation of new proposals for external funding. Research sponsors expect researchers to consider the ethical implications associated with their proposed research projects. Researchers are required to contact either their Associate Dean for Research or Chair of the most appropriate Research Ethics Committee to discuss any perceived or actual ethical implications associated with their research proposals in the first instance.
- 10.2 All researchers are expected to adhere to the *NTU Research Ethics Policy and Procedure*, available at:
- <https://www.ntu.ac.uk/research/research-environment-and-governance/governance-and-integrity>
- The policy applies to all those conducting research within, or on behalf of the University, including staff, persons holding honorary University appointments, visiting researchers, undergraduate and research students (including visiting students).
- 10.3 The purpose of the *NTU Ethics Policy and Procedure* is to establish and promote good ethical practice in the conduct of academic research. It provides:
- 10.3.1 an over-arching framework of principles designed to promote a quality research culture, where excellence is promoted and key elements such as effective leadership, openness, accountability and honesty, are maintained and enhanced;

- 10.3.2 clarity about the structures the University has in place to internally review its research ethics practices and activities in relation to research ethics.
- 10.4 **Research Involving Human Participants:** The following paragraphs set out the basic principles that should be adhered to for all research involving human participants, human material or human data (i.e. data obtained via interaction or intervention with individuals). However, there are laws governing the use of human subjects for research and teaching purposes. Researchers should be familiar with the legal requirements that must be met and adhered to in order to undertake research involving humans. During the planning stage of research or teaching-demonstrations which may require human participants, the researcher must contact the appropriate School Associate Dean for Research, the Chair of the appropriate Research Ethics Committee or the Research Office to seek guidance on the legal requirements associated with working with human participants.
- 10.5 In any research involving human participants, the safety, rights and dignity of the participant must be the primary concern. The benefits of any project must always outweigh the risks involved. Where appropriate, thorough written research protocols on ethical and health and safety procedures for the project must be approved by the relevant Research Ethics Committee before work commences. These protocols will include procedures for:
- 10.5.1 governing participant eligibility and confidentiality;
- 10.5.2 data (including images) collection, storage and retrieval and manipulation; and
- 10.5.3 the analysis and reporting of information.
- 10.6 The research must adhere to all legal requirements and guidelines produced by other appropriate bodies. It is legally and ethically paramount that all information gained from research regarding individuals should be kept strictly confidential and securely stored. Unless prior informed and explicit consent is given, research information should not be presented in a manner that could potentially identify any person(s).
- 10.7 Researchers have a responsibility of care towards the individuals participating in the research and are accountable for their well-being. In all research, efforts should be taken to (i) minimise the number of human participants used based on statistical good practice and (ii) minimise all the potential risks to the wellbeing of the research participants.
- 10.8 Other than in exceptional circumstances (see paragraph 10.9) the University expects that all participants in research provide informed consent before taking part in a project. Arrangements should be made to provide any relevant information in an appropriate format to all research participants (as well as to their legal guardians, if appropriate). Research participants should be aware of all the potential risks and benefits, if any, associated with their involvement. They must also understand that their involvement is entirely voluntary and they are free to withdraw at any time. When research participants are patients, they must be informed that withdrawal from a research project will in no way affect the quality of any care that they may be receiving. Likewise, this principle should apply to all research participants in receipt of a service, including students. There should be no coercion to participate. If someone does not wish to participate in the research, this must be respected.
- 10.9 In exceptional circumstances research projects may be designed in such a way that precludes informed consent being given by participants before the project

commences. In such circumstances Research Ethics Committees will not automatically take the view that all such research designs are inherently unethical. They will attempt to make judgments about whether the risks to privacy are necessary, whether they are in proportion to the anticipated benefits and whether the researchers will manage them appropriately.

- 10.10 Where appropriate, a permanent record should be retained of consent gained from individuals.
- 10.11 Research on minors and vulnerable adults (for example those with mental health conditions or learning difficulties) places on researchers additional responsibilities. Researchers working in this field must ensure that they have thought through the ethical implications of involving minors and potentially vulnerable groups and have in place safeguards to ensure ethically sound practice. Researchers should also check and comply with legal obligations before proceeding with the research (such as obtaining clearance from the Disclosure and Barring Service prior to commencing research). In any study protocol, the role and responsibilities of individuals on whom the research participant is dependent (for example parents, carers, and supporters) must be clearly explained. Where consent is given by a legal guardian or carer it is important to also try and obtain consent from the research participant.
- 10.12 When research involves bodily materials of the deceased, consent to use these should ideally come from the deceased themselves (via an informed directive or will) or from the deceased's relatives. Arrangements for the disposal of material and the reporting of findings must be described to relatives. In all cases Human Tissue Authority (HTA) regulations must be adhered to where these are relevant.
- 10.13 **Research Involving Animals:** The *Animals (Scientific Procedures) Act 1986* identifies the legal requirements associated with research or teaching involving animal procedures in the UK. Under the provision of the Act, research involving certain animals requires prior approval from the relevant ethics and regulatory committees. All legal requirements and guidelines produced by other appropriate bodies must be adhered to, in particular Home Office controls. Details of regulation of animal use in scientific procedures and current legislation, can be located at:
- <http://www.legislation.gov.uk/ukpga/1986/14/contents>
- Research involving animals under this Act will require Home Office licences. Researchers planning projects that will involve procedures on animals are required to contact the Chair of the relevant Research Ethics Committee for guidance and referral.
- 10.14 **Ethical Review Procedures:** All research or teaching-demonstrations involving human participants, human material or human data requires ethical consideration to be given to the implications for those taking part in the research and/or whose tissues or data are being used. The requirement for ethical review does not include research where information about human participants is publicly and lawfully available (for example census data, academic and professional literature, population statistics published by government departments, law reports and personal letters/diaries in public libraries).
- 10.15 Where required, approval from an appropriate Research Ethics Committee must be gained prior to commencement of the project. If the Researcher is unsure if ethical review is required, all queries should be addressed in the first instance

to their Associate Dean of Research, who in turn will consult, if necessary, with the appropriate Research Ethics Committee.

- 10.16 For certain types of research (for example animal research or research involving NHS patients), external Research Ethics Committees already exist to consider research proposals, and their use for such research is compulsory. In such cases no University Research Ethics Committee is empowered to give the research proposal ethical approval. Research must be referred to an NHS Research Ethics Committee.
- 10.17 In cases where research projects are being transferred to NTU, they will not require review by an NTU Research Ethics Committee provided they have been approved by a Research Ethics Committee of equal standing. Typically this approval would be given by a Research Ethics Committee at another UK University. A copy of the external body's approval should be submitted to the most appropriate NTU Research Ethics Committee. The project should not proceed until the Research Ethics Committee has indicated it accepts the decision of the external committee and its standing.
- 10.18 The location of the Research Ethics Committee approving the research project does not have a bearing on the responsibility of the Researcher to remain vigilant for unethical behaviour. Unethical behaviour is defined as being in opposition to the NTU Research Ethics Policy and Procedure and Code of Practice for Research. If such concerns arise they should be reported by the Researcher to the Chair of the most appropriate NTU Research Ethics Committee along with their School Associate Dean for Research and line manager.
- 10.19 All Research Ethics Committees are dependent on the information supplied by the principal investigator to inform their decision-making. It is therefore the responsibility of the researcher to ensure the information provided to those committees is properly researched, full, truthful and accurate.

11 Health & Safety

- 11.1 It is essential to ensure that there is adherence to all Health and Safety regulations produced by legislators, the University or other relevant bodies. The safety of the participants, staff, students and others connected with the research must have absolute priority at all times and throughout the entire duration of the project. The health and safety of participants, staff, students and others connected with the research is an ongoing and proactive process and it must be taken into consideration as research projects are designed, executed and delivered; including project approval and recruitment of staff, students and participants to the project.
- 11.2 The University's Health and Safety Codes of Practice must be adhered to and all researchers, supervisors of researchers and research students should be familiar with those that apply to their area of research. The University's Health and Safety Statement Policy, Organisation and Management System document can be found at:

https://www4.ntu.ac.uk/staffnet/quick-links/a-z/central_a-z_listing.html
- 11.3 Deans of School are responsible for ensuring health and safety requirements are fulfilled in their areas.
- 11.4 Researchers have a responsibility to ensure the health and safety of any research participants. Incidents that impact on the health and safety of research participants must be reported to the appropriate person(s)/bodies(s) (for example Research Ethics Committees, funders, Deans of School). Incident

reporting requirements should be agreed by all parties involved in the research for each project prior to commencement.

- 11.5 Researchers should complete a Risk Assessment Form to ensure their project has been appropriately considered and approved by authorised individuals in the University, where required.

12 Reporting Breaches of the Code of Practice

- 12.1 Researchers and other members of staff have a duty to report any breach of this *Code of Practice* where they have good reason to believe it is occurring. In the first instance this should be reported to either a Head of Service, Dean or Head of College. The University, in accordance with its *Whistle-blowing (Public Interest Disclosures) Policy* available at: https://www.ntu.ac.uk/staffnet/document_uploads/157408.pdf, will look to support those who raise concerns about the conduct of research in good faith and will not penalise them.

13 Document Governance and Control

Title:	Code of Practice for Research
Document owner:	Deputy Vice-Chancellor for Research and Innovation

Version number	Approval date	Approved by	Amendment
2.0	07/10/15	URC	The Code of Practice for Research has been revised to: (i) add a new section on use of student-related data for research purposes, (ii) to make reference to the Research Data Management Policy, and (iii) to clarify coverage of both research students and staff.
3.0	19/10/2016	URC	The Code of Practice for Research now makes reference to sustainability of research: A statement was added at the end of clause 2.3. It is based on the definition of 'sustainable research' as used in the LIFE Index, for which NTU is seeking a Gold award. Further minor amendments have been made to reflect the current shape of research support infrastructure at NTU.
4.0	11/12/2018	URC	Key updates adopted to incorporate sector best practice and recommendations from the UK Research Integrity Office.

