
Training opportunities for research students

Contents

Foreword from the Academic Dean	4
Introduction	5
Mandatory training	7
Researcher development	10
Information technology	15
Career development	17
Library resources and referencing	20
Transferable academic skills	21
Conferences, lectures, and seminars	23
External resources	25

Foreword from the Academic Dean



I am delighted to introduce you to the wide range of training opportunities in research skills available to you as a student at The Institute of Cancer Research (the ICR).

Whilst your primary occupation during your studies is, of course, the particular research project you have embarked upon, it is important to remember the significance of acquiring more general research training and individual skills development during your time as a student here. These skills are critical in enhancing your personal and professional experience as a scientist, and promoting your employability.

We expect students to engage in a minimum of ten days of skills training per academic year. Some of the courses in this guide are mandatory, others optional, some taught face-to-face and others online. Your Training Tracker will help you keep a record of everything that you do.

I very much hope you will enjoy the wide range of opportunities set out in this booklet.

Clare Isacke
Academic Dean

Introduction

The UK Research Councils require that postgraduate researchers develop transferable skills during the course of their studies, and recommend through the Researcher Concordat (vitae.ac.uk/concordat) that research students undertake at least ten days of personal development per year. The Researcher Development Framework (RDF) breaks down the skills you are expected to develop in more detail (vitae.ac.uk/vitae-publications/rdf-related). The ICR's extensive programme of courses, events, and online resources outlined in this booklet will help you to meet these requirements.

Getting started

Training Needs Screener

students.icr.ac.uk/trainingneeds

You are encouraged to visit the Training Needs Screener within your first month at the ICR. This tool helps you to identify and prioritise immediate training needs, and selects courses and materials that may be of particular interest to help improve your weaker areas.

Keeping a record of your training

Training Tracker

tt.icr.ac.uk

To help you keep track of your professional development, training you book through the ICR's Learning and Development website will automatically be entered into your online Training Tracker. You can also manually enter any online learning you complete, as well as external courses, events and conferences. The Training Tracker may provide a useful basis for discussion in meetings with your supervisor and when preparing a CV.

iProgress

iprogress.icr.ac.uk

In addition to the Training Tracker, you, your supervisor and the Academic Dean's Team can view your academic progress on iProgress. This system tracks and follows your work towards the key milestones of your degree.

Booking a course

The ICR's face-to-face courses and events can be booked through the Learning and Development website at training.icr.ac.uk. Please note that you must have agreement from your supervisor before booking any of the training courses or events.

Where to go for more information

The majority of our courses and events are organised by the Learning and Development team, whose objective is to provide training and support in the skills outlined in the RDF. Reach them by emailing training@icr.ac.uk or calling ext. 4556. Support for researchers is directly provided by Elise Glen and Celia Monteiro Domingues, former postdocs at Newcastle University and the ICR, respectively, and Barbara Villarejo Balcells, a former ICR student and Higher Scientific Officer. Their experiences make them familiar with the career development challenges faced by researchers.

Further support is provided by the Academic Services department, who provide e-learning resources and give training in library and literature searching skills. They also organise the induction event that takes place when you first join the ICR.

Mandatory training

This section lists the training courses and resources that all research students must complete; some in the first six months, others within the first or second year.

In your first six months

The ICR provides comprehensive training to ensure that its staff and students are aware of their rights and responsibilities with regard to key areas of legislation. For this, you are required to complete a couple of classroom-based courses and several online courses within your first six months. You may also be required to complete two additional courses depending on your area of research—these are marked with an asterisk *. All of these courses can be accessed through the Learning and Development website (training.icr.ac.uk).

Classroom-based courses

Health and Safety

A workshop covering health and safety in the office and laboratory.

A Supportive Workplace

A course designed to introduce how we each contribute to the culture of the organisation—Our ICR. It is important that we can all work well together to achieve our mission of defeating cancer.

Good Clinical Practice *

A training course for those involved in clinical trials.

Online courses

Data Protection

An overview of data protection legislation, your responsibilities and its impact on your work.

Information Management

An introduction to managing information at the ICR.

Freedom of Information

An overview of the legislation on Freedom of Information and your roles and responsibilities.

Information Security Awareness

An overview of common online security issues, such as scams and Identity Theft, and how to protect against these.

Risk Management

This module describes how risk is monitored within the ICR, outlines our policy on categorising and managing risk, and highlights the benefits of using a risk management approach in your own project.

Display Screen Equipment

Health and safety module on safely using display screen equipment.

Human Tissue Act *

Training module for people working with human tissue samples.

Perspectives in Oncology

perspectives.icr.ac.uk

Perspectives in Oncology has been designed to give all new research students an overview of cancer, its research and its treatment, bringing everyone to the same level of knowledge irrespective of background. It has ten modules:

- Cancer: causes and prevention
- Tumour genetics
- Common cancers
- An approach to therapies
- Bioinformatics
- Cancer physics
- Basics of tumour biology
- Cell signalling
- Structural biology
- Experimental therapeutics



End-of-module tests assess your progress through the course.

PhD students must score >75% in five end-of-module tests within the first six months, including “Common cancers”, “Cancer: causes and prevention”, and “An approach to therapies”.

By the end of your first year

Perspectives in Oncology

PhD students are required to pass all remaining end-of-module tests on Perspectives in Oncology by the time of their transfer viva.

By the end of your second year

Research Integrity

This workshop examines what is meant by research integrity. It looks at the frequency and consequences of scientific misconduct, and gives guidance on how to avoid misconduct in your own work. In addition, the workshop provides a forum for discussing specific case studies to help determine what course of action to take when faced with difficult issues that may arise during a researcher’s career.

Preparing to Submit Your Thesis

The Registry team and the Academic Dean’s team cover the process of thesis submission and time-frames.

Researcher development

The ICR provides an extensive programme of courses to directly support your development as a researcher. Some examples are outlined below, but the full list is available on the training website (training.icr.ac.uk).

Courses and workshops

Writing Skills for the PhD and Beyond

Aimed at early stage researchers, this course will help you to write both within and outside academia.

Fellowship Applications—an Introduction

In this session you hear from Postdocs and junior team leaders who secured their own fellowship, and from a representative of the Research Support Unit, who support researchers making fellowship applications.

Writing a Fellowship Application

This half-day workshop covers how to write a good fellowship application—including practice of reviewing and writing proposals.

Grant-writing Advice from CRUK and the Pioneer Award

CRUK and the ICR co-host an information session on best practice in grant writing, using the Pioneer Award as a case study. You will hear from someone who makes funding decisions for this award and also from award holders themselves.

Creating Prize-Winning Scientific Posters

Aimed at researchers who wish to improve the way they present data visually, and who want to create eye-catching posters that make an impact.

Presenting at a Research Conference

Develop your presentation skills and gain the confidence to help you present your research to internal and external audiences.

Maintaining Momentum During a PhD

In this course we identify some of the internal and external causes of a dip in momentum and help you to think about strategies to address them.

Good Laboratory Practice (GLP)

An introduction to standards and processes for Good Laboratory Practice.

Managing Your Research Project

A workshop looking at how to organise time and resources to best achieve the goals of your project. It also explores the nature of project management as well as goals, milestones and risks.

Statistics Course

Four modules delivered by the ICR's Clinical Trials and Statistics Unit, teaching essential statistics skills that may be required in the scientific environment.

Statistics in Oncology

This course aims to present an overview of how statistics are used within cancer research, and to illustrate different statistical methods using examples of studies related to the work of the ICR.

Introduction to R

Aimed at helping you to use the powerful statistical programme R in order to perform basic statistical techniques such as distributions, descriptive statistics, graphics and statistical testing.

Advanced R

Following on from the introductory course, this goes into more detail on filtering and combining complex datasets and also covers areas such as looping, advanced graphing and use of R packages.

Genomics with R and Bioconductor

Aimed at researchers who would like to be able to use R and Bioconductor to analyse genomic data.

Introduction to Bioinformatics

This three-day course introduces you to the uses of bioinformatics in cancer research, and aims to empower you to generate your own bioinformatic analyses. It is provided by internal experts including Dr Bissan Al-Lazikani, Team Leader.

GraphPad Prism

The course offers a refresher of statistical techniques and how they can be applied using the GraphPad Prism software. Provided by Dr Anne Segonds-Pichon from the Babraham Bioinformatics Department.

Introduction to Python

This course introduces you to Python code: how it works and how to troubleshoot simple problems, which will begin to give you the tools to start writing your own Python scripts.

Taking the Fear out of Vivas

A session exploring the viva process, aimed at students at all stages of their PhD. Crucial for those preparing their final PhD submission.

Insight into Peer-Review of Journal Articles

An introduction to the peer review process.

Science Communication Lunchtime workshops

The ICR communications team hosts workshops to help researchers develop their science writing, social media, and public engagement skills.

Public Engagement course

The policy and engagement team have developed a public engagement course for all researchers and students. You can also email Daisy, the ICR's Public Engagement Officer, at daisy.henesy@icr.ac.uk, for support and guidance around public engagement activities.

Technical seminars

The PostDoc and Scientific Officer Associations run a series of technical seminars to support students with some of the leading-edge scientific techniques including:

- Real-time PCR
- Flow cytometry
- Cell and tissue culture
- RNAi screens
- Bioassays in drug development
- Structural biology workshop
- Chemistry for non-chemists
- Microscopy and image acquisition
- Pharmacokinetics
- CRISPR
- Chemical structure and reactivity

Online resources

Nature Masterclasses

masterclasses.nature.com/courses/28

An online suite of short modules that provides expertise in scientific writing and publishing direct from Nature journal editors.

Social media guides

tinyurl.com/ICRDigitalComs

Guides for using social media to communicate science, including live event tweeting and dealing with negative comments, can be found on Nexus. You can also email digital@icr.ac.uk for guidance.

Journal clubs

Journal clubs are an opportunity to read and critique recent publications with other students and more experienced scientists; you should attend these regularly. They tend to be organised within specific lab groups, or in wider subject groupings. Ask your supervisors or lab mates for more information.

Practicing communication

Public engagement opportunities

Learn how to build support and enthusiasm for scientific research, inspire young people, or reach out to our local community. Opportunities to take part in public engagement activities are shared through pages on Nexus and a monthly email newsletter—contact daisy.henesy@icr.ac.uk if you would like to be added to the mailing list. Nexus also offers guidance on organizing events.

Science communication prizes

Develop your science communication skills and learn how to share your passion and enhance your reputation by working towards one of our science communication prizes. The prizes include a Science Photography and Imaging Award, a Science Writing Prize and the Public Engager of the Year Award.

Information technology

Learning and Development provides a range of IT training opportunities that are particularly relevant to scientific work. Book a course through training.icr.ac.uk.

Classroom-based courses

Adobe Photoshop

An introduction to Adobe Photoshop that explores how you can use the software to prepare high-quality scientific figures for publications or for your thesis, while doing so with integrity.

Adobe Illustrator

An introduction to Adobe Illustrator that demonstrates how the software can be used to create high-quality illustrations, including scientific diagrams for publications or for your thesis.

Word for Thesis Writing

Guidance on writing and formatting your thesis and reports using Microsoft Word.

MS Excel (*beginner, intermediate, and advanced*)

This training is delivered as short training modules that can be booked individually to cover a range of topics such as relative and absolute referencing, working with chart objects and templates, pivot tables, linking and consolidating workbooks.

Introduction to HPC and Linux

A hands on workshop introducing you to High Performance Computing (HPC) and the Linux operating system, often used in academia on computer clusters and supercomputers.

Scientific Computing User Forum (SCUF)

This group meets every two months to provide a forum for sharing expertise and advice to other researchers undertaking projects that require computing. Please email training@icr.ac.uk to be added to the mailing list, or contact the group directly at scuf_committe@icr.ac.uk.

Career development

The ICRs Learning and Development team works with The Careers Group at the University of London (thecareersgroup.co.uk) to provide career development opportunities for ICR students. Trained careers advisors (a number of whom have a research background) regularly visit both ICR sites to run skills development sessions and offer one-to-one careers guidance interviews. The advisors also run webinars on key elements of career development. The student careers programme has been, and continues to be, designed to support students' transitions into their next research role. It is based on student feedback, and the student committee is closely involved in the initiative.

The Careers Group events

Skills workshops

These sessions, which usually take place over half a day, look at developing skills to enhance your career prospects, they cover topics including:

- Networking
- Careers outside academia
- Intelligent job hunting
- CVs and interviews

One-to-One With Careers Advisor

A confidential opportunity to talk with a trained careers advisor about any career issues.

Careers Webinars

Live webinars on careers topics run throughout the year and are then available as recordings from the resources pages in Nexus.

Clinical academic pathway

Postdoc Career Conference

Presentations on potential career paths at the ICR and externally, aimed at postdocs and final year PhD students.

Fellowship Applications—an Introduction

Covers writing a proposal from the applicant's perspective, hints and tips from a grant reviewer, and essentials when making an application. Register at training.icr.ac.uk.

The ICR runs the BRC's Clinical Academic Careers Programme which comprises talks and workshops relevant to clinicians as well as talks from funding bodies such as the MRC, NIHR, AMS, CRUK, and Wellcome Trust. Please email training@icr.ac.uk for more information.

The RMH/ICR Biomedical Research Centre (cancerbrc.org) also provides support for clinician researchers including access to NIHR leadership programmes for academic trainees.

The Clinical Academic Forum is a network which aims to bring RMH and ICR clinical researchers together to hear from others at different stages of their careers, so they can share challenges and learn about any support that is available. The group meets quarterly over a free lunch, with relevant informal talks. See training.icr.ac.uk for more detail.

Further resources for clinicians are available at <http://bit.ly/ICRClinicalCareers>.

Career development training/ programme

Succeeding in academia

A comprehensive programme of support for those wishing to develop their career in academia including: support for writing fellowships, applying for postdocs abroad, independent careers advice from the University of London, career webinars.

Succeeding in industry

This programme focusses on developing the skills and knowledge to support early career researchers considering moving into industry, with events such as 'Alumni in industry' and 'Recruiters in Industry'.

Leadership in action

A three-day experiential programme designed to prepare researchers for leadership in their chosen research field or within the wider community.

Enterprise training programme

The Enterprise Lab

This two day training course, developed in conjunction with Imperial College, introduces researchers to the possibility of commercialising their work. It has been very well received by attendees, who have described it as 'excellent' and 'insightful'. Researchers are nominated by their Team Leaders to attend.

The Enterprise Lunch Series

This series of lunch seminars, hosted by members of the Enterprise Unit, cover specific aspects of the commercialisation of science, such as patents and collaboration agreements.

Library resources and referencing

The Library and Information Service provides training in accessing resources and reference management.

Scheduled training

Accessing Library Resources

An introduction to library resources available at the ICR, including e-journals, databases and books. This course is scheduled to take place at various points throughout the year, and can be booked through the Learning and Development website (training.icr.ac.uk). Please contact library staff at library@icr.ac.uk for further details.

Ad-hoc training

Please contact library staff directly at library@icr.ac.uk to arrange a one-to-one session covering one of the following topics:

PubMed Searching

General searching tips and an introduction to some of PubMed's advanced features.

Introduction to Web of Knowledge

General searching tips and an introduction to some of Web of Knowledge's advanced features.

EndNote Training

Learn how to manage your references and other materials that you have collected.

Transferable academic skills

The ability to communicate effectively to a wider audience, build rapport with peers and colleagues, and manage your time effectively are examples of transferable skills that you will need to develop and master for a successful career as a researcher.

Online resources

Skills

skills.icr.ac.uk

Skills is a website designed to support you in developing your transferable skills. It contains short, blog-style articles written by postdocs, senior researchers, and other experts, sharing their experiences and advice. Topics on Skills are arranged into four categories:

- Personal effectiveness
- Communication skills
- Finding and using information
- Science in context

Over time new posts will appear on the site, relevant to the stage of your project. Posts will also be recommended to you at certain times, for example when you are preparing for your transfer viva or writing your thesis. The list of activities generated by the Training Needs Screener may also contain direct links to posts on Skills.

Student-Focused Resources on the intranet

The Learning and Development Team provide online training resources on Nexus including a subset of resources specifically aimed at students (Nexus > Staff essentials > Student-specific resources). These cover thesis writing, viva examinations, and presentations.

Classroom-based courses

Learning and Development offers a number of courses on transferable academic skills. These courses are accessible through the Learning and Development website (training.icr.ac.uk).

Presentation Skills

This practical one-day course covers areas such as delivery styles, visual aids, and preparing and structuring ideas, with the opportunity to practise a presentation and receive feedback.

Project Management

This course covers a range of areas including developing, planning, and organising a project, managing risks, and project closure and review.

English Language Classes

Weekly sessions for those with English as a second language are offered free of charge – contact hrtraining@icr.ac.uk to enquire.

Communicating Assertively

This course gives you the guidance and tools that enable you to develop your assertiveness, improve your confidence and maximise your contribution to your team's research.

Influencing and Negotiation Skills Training

In order to influence others, and persuade them of your way of thinking, you need to communicate confidently, build a relationship and remain calm under pressure. This course is designed to enable you to be more effective, influential, and persuasive at work – through recognising the link between your communication skills and the impact they can have on others.

Conferences, lectures, and seminars

A wide range of research lectures and seminars are organised annually at the ICR. Students are expected to attend as many of these as possible. Information about the current programme can be found at nexus.icr.ac.uk/Events.

Conferences

ICR Conference

This annual event is designed to disseminate information about the research taking place across the ICR, and includes lectures, seminars, poster presentations, and social events. Each year, third year PhD students and second year clinical fellows are required to submit an abstract for the conference. The authors of the five best extracts (as determined by a judging panel) will be selected to present a talk at the conference—all others are required to present a poster. Prizes will be awarded to all student speakers, and the three best posters presentations.

Annual Student Conference

An opportunity for research students to meet and share their ideas away from the laboratory environment.

Lectures

Link Lectures

The annual Link Lectures celebrate the link between the scientific work of the ICR and the clinical work of the Royal Marsden, and are jointly run by both organisations. In this lecture series, eminent scientists and clinicians whose research has a significant translational element are invited to talk about their life and work. Link Lectures are aimed at a general audience.

Inaugural Lectures

All newly appointed professors at the ICR are invited to give an inaugural lecture on their research careers to date. As with Link Lectures, Inaugural Lectures are aimed at a general audience.

Grand Rounds

In the Grand Rounds seminars, scientific divisions within the ICR showcase their recent activities to the rest of the ICR and Royal Marsden.

Seminars

A large number of seminars are organised throughout the year by divisions, teams and individuals at the ICR. They are often intended for a more specialised audience, but tend to be open to all who are interested.

These seminars are generally advertised through Nexus, poster on notice board, or via the weekly internal newsletter—Inside ICR.

External resources

There are many resources and courses available from sources outside the ICR; this is a short selection of those that are particularly relevant. For more information and dates about the resources and courses highlighted below please view the external training resources file available at <http://bit.ly/ICRExternalTraining>.

The Royal Marsden

The Royal Marsden runs some training courses that ICR students may be interested in attending, including Good Clinical Practice training. For specific enquiries contact TrainingandHRAdmin@rmh.nhs.uk.

Vitae

Vitae is a national organisation championing the personal, professional and career development of doctoral researchers and research staff in higher education. Their website is vitae.ac.uk.

Vitae provides workshops, courses, case studies, and news on a range of activities to support you in developing your career. The ICR is a member of Vitae, so students can access all the online resources free of charge simply by registering. These resources are all available at vitae.ac.uk/pgr.

Other universities

Many other higher education institutions, including Imperial and UCL, make their researcher training programmes available to ICR students and staff for a modest fee. View the external training resources file at <http://bit.ly/ICRExternalTraining> for more information.

Making the discoveries that defeat cancer