Nature Masterclasses
On-demand

SPRINGER NATURE GROUP

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Forthcoming content

SPRINGER NATURE

Writing a Research Paper: 2nd Edition

January 2024 | Write and publish

About this course

Writing research papers allows scientists to contribute to the scientific record, thereby advancing their fields and careers. To ensure that the findings researchers have invested their time and efforts in are heard, it's important that we equip them with the skills necessary to not only write a research paper, but to write one that is effective. Effective research paper make it easier for decision makers (editors and reviewers) to recognise the impact of the presented research, whilst providing fellow researchers with the information they need, boosting uptake and dissemination of the presented conclusions.

Course details

- 5-module course with a course certificate
- 12 experts in writing and evaluating research papers, including 6 *Nature* and *Nature Portfolio* Journal Editors, eminent researchers, a linguistic design manager and a storytelling expert
- 14.5 hours of learning
- 5-50 minute lessons
- English language subtitle with transcripts

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Writing a Research Paper: 2nd Edition

January 2024 | Write and publish

Researchers will learn

- What makes an effective research paper
- The usual format of a research paper and the specifics of the *Nature* structure
- Narrative tools and their application to scientific writing
- Principles of scientific writing style
- How to write a research paper section by section
- Developing effective titles and abstracts
- Finalising your research paper for submission

Benefits for institutions

- Provide your researchers with the skills necessary to write an effective research paper that allows them to highlight the impact of their work
- Improve the reputation of your institution by ensuring your researchers are publishing their findings in an impactful way
- Support the professional and career development of your researchers while saving staff time on training

Writing a Research Paper: 2nd Edition

January 2024 | Write and publish

Benefits of the 2nd edition:

- Restructured and enriched existing topics for a better learning experience
- Video interviews with Nature and Nature Portfolio Journal Editors (including Magdalena Skipper, Chief Editor of *Nature*), researchers and storytelling experts
- Topics are broken into smaller sections to make it easier for you to focus on what is important for your scientific writing journey
- Covers the application of narrative tools when writing research papers
- Concepts are explained in more detail using examples from real paper where possible
- Extensive worked examples showcasing how concepts and step-by-step strategies are applied to a research paper
- Portfolio activities to encourage and guide applying the topics of each lesson to your own research paper
- Course transcripts for accessibility.

Writing a Research Paper: 2nd Edition

January 2024 | Write and publish

Module 1: Understanding the elements of an effective research paper

- Welcome to the course
- About this course
- The structure of a research paper
- What makes an effective research paper
- Strategies to write an effective research paper
  - Overview of the strategies for writing an effective research paper
  - Narrative tools and research papers – how they work together
  - Principles of scientific writing style
  - Key points about the strategies for writing an effective research paper
- Module summary

Module 2: Applying narrative tools to your research paper

- Introduction
- The key message
- The audience
- The story arc
- Steps to develop your story arc
- The evidence
- Module summary

Module 3: Using the principles of scientific writing style for your research paper

- Introduction
- Informative writing
  - Introduction to informative writing
  - Pitfalls that can undermine the informativeness of your research paper
  - Master the basics of informative writing
  - Take informative writing to the next level
  - Apply the key points of informative writing to your research paper
- Concise writing
  - Introduction to concise writing
  - Pitfalls that can undermine the conciseness of your research paper
  - Master the basics of concise writing
  - Take concise writing to the next level
  - Apply the key points of concise writing to your research paper
- Well-structured writing
  - Introduction to well-structured writing
  - Pitfalls that can undermine the structure of your research paper
  - Master the basics of well-structured writing
  - Take well-structured writing to the next level
  - Key takeaways for ensuring well-structured writing
- Engaging Writing
  - Introduction to engaging writing
  - Pitfalls that can undermine the engaging of your research paper
  - Master the basics of engaging writing
  - Take engaging writing to the next level
  - Key takeaways for writing engagingly
- Module summary

Writing a Research Paper: 2nd Edition

January 2024 | Write and publish

Module 4: Writing your research paper section by section

- Introduction
- Tools to help you plan and write the sections of your paper
- The methods section
  - The purpose of the methods section
  - What to include in the methods section
  - How to structure the methods section
  - The specific writing style of the methods section
  - Common pitfalls in the methods section
  - Key points about writing the methods section
- The results section
  - The purpose of the results section
  - What to include in the results section
  - How to structure the results section
  - The specific writing style of the results section
  - Common pitfalls in the results section
  - Key points about writing the results section
- The discussion section
  - The purpose of the discussion section
  - What to include in the discussion section
  - How to structure the discussion section
  - The specific writing style of the discussion section
  - Common pitfalls in the discussion section
  - Key points about writing the discussion section
- The conclusion section
  - The purpose of the conclusion section
  - How to structure the conclusion section
  - The specific writing style of the conclusion section
  - Common pitfalls in the conclusion section
  - Key points about writing the conclusion section
- The introduction section
  - The purpose of the introduction section
  - What to include in the introduction section
  - How to structure the introduction section
  - The specific writing style of the introduction section
  - Common pitfalls in the introduction section
  - Key points about writing the introduction section
- Module summary

Module 5: Finalising your research paper for submission

- Introduction
- Assemble an appealing title
- Compose an effective abstract
- Revise your paper before submission
- Module summary
- Course summary

Writing a Research Paper: 2nd Edition

January 2024 | Write and publish

Expert panel

Developed with an international panel of *Nature* and *Nature Portfolio* Journal Editors, an eminent researcher and a linguistic design manager

Davide Esposito
Chief Editor, *Nature Catalysis*

Sadaf Shadan
Biological Sciences Team Manager and Senior Editor, *Nature*

Joshua Schimel
Professor of Ecology, Evolution and Marine Biology, University of California, Santa Barbara;
Authored the book "Writing Science"

Peter Gorsuch
Linguistic Design Manager, Springer Nature

Writing a Research Paper: 2nd Edition

January 2024 | Write and publish

Interviewees

This course contains additional insights on how to write a research paper through video interviews from:

Magdalena Skipper
Chief Editor, *Nature* and Chief Editorial Advisor, Nature Portfolio

Zoë Doubleday
ARC Future Fellow, University of South Australia;
Advocate for a better readability of science

Alexia-Ileana Zaromytidou
Chief Editor, *Nature Cancer*

Anna Ploszajski
Freelance materials scientist and storyteller;
Trains researcher in storytelling

Writing a Research Paper: 2nd Edition

January 2024 | Write and publish

Interviewees

This course contains additional insights on how to write a research paper through video interviews from:

Lu Shi
Senior Editor, *Nature Nanotechnology*

Tamara Goldin
Chief Editor, *Nature Geoscience*

Malena Rice
Assistant Professor, Yale Department of Astronomy; Part of 2023 Forbes 30 under 30 list, 2023 Rising Talent by the Women's Forum of the Economy and

Xiaodong Zou
Professor, Department of Materials and Environmental Chemistry, Stockholm University

Current courses

Creating Successful Research Posters

Published November 2023 | Share and disseminate

About this course

In today's fast-paced world of research, effective communication is key. An engaging research poster is a great way to visually share your findings concisely and broaden your professional network with other researchers. Learn how to craft great engaging research posters and prepare a handout and conversation that will captivate your audience. Whether you're a student presenting your first poster at a conference or an early career researcher seeking feedback and collaborations, this course will provide you with the knowledge, skills, and confidence and improve your chances of success.

Course details

- 1-module course with a course certificate
- 5 experts in research poster design and presentation and science communication
- 4.5 hours of learning
- 10 - 35 minute lessons
- English language subtitles and transcripts

Creating Successful Research Posters

Published November 2023 | Share and disseminate

Researchers will learn to

- Set their communication goal
- Identify their audience and select their key message and supporting material
- Select the visual elements and supporting text for their poster
- Design a poster that will communicate their key message effectively
- Prepare a handout that will be useful to the audience
- Be prepared to spark great conversations about their research.

Benefits for institutions

- Improve the poster preparation and presentation skills of researchers at your institution so they feel confident and empowered to share their findings at national and international conferences
- Improve the reputation of your institution by ensuring your researchers can create and present excellent research posters and network effectively at conferences
- Support the professional and career development of your researchers while saving staff time on mentoring and training.

Creating Successful Research Posters

Published November 2023 | Share and disseminate

Moule 1: Creating successful research posters

- Welcome to the course
- About this course
- What makes a great poster?
- Identify your goal and audience
- Select your key message and supporting material
- Structure your poster, conversation and handout
- Prepare the text for your poster
- Decide on the layout of your poster
- Design and format your poster
- Prepare your conversation and handout
- Course summary

Creating Successful Research Posters

Published November 2023 | Share and disseminate

Course experts

The course was developed and refined by an international panel of academics, science artists and poster design and presentation experts

Jean-luc Doumont
Founding Partner, Principiæ

- A thought-provoking instructor, he delivers lectures and interactive workshops on research talks, papers and posters
- Over **more than 30 years** he has addressed grad students, postdocs and faculty at some **200 universities** in **over 30 countries**
- Regular speaker at events and conferences
- Has participated in Advancing your Scientific Presentations

Creating Successful Research Posters

Published November 2023 | Share and disseminate

Beata Edyta Mierzwa

Postdoctoral fellow, University of California San Diego and science artist, Beata Science Art

- Molecular biologist
- She combines her passion for science and art to create scientific illustrations
- Was awarded ‘Best Scientific Poster Award’ at VIZBI 2019

Nuria Melisa Morales García

Founder and graphic designer, Science Graphic Design

- Paleontologist and award winning science communicator
- She is passionate about creating accessible graphics for academia, industry and NGOs across a wide array of disciplines

Creating Successful Research Posters

Published November 2023 | Share and disseminate

Interviewees

The course contains additional insights from other research posters and science communication experts

Michael Dahlstrom

Director, Greenlee School of Journalism and Communication, Iowa State University

- His research explores how storytelling impacts the communication of science and has been published in leading journals
- Has participated in Advancing your Scientific Presentations and Narrative Tools for Researchers

Amina Yonis

Founder & CEO, The Page Doctor

- **270k subscribers** and over **8 million views** on her YouTube channel
- Course on Academia.edu on Designing an award-winning conference poster
- Her company, The Page Doctor, provides tailored academic support for university students

Research Integrity: Publication Ethics

Published October 2023 | Write and publish

About this course

This course supports researchers in mastering the steps needed to publish their work with integrity. By providing strategies on how to apply editorial policies to their manuscripts, the course serves as a toolbox from which researchers can pick the advice relevant to their needs, for instance, when dealing with copyright, data transparency, author lists and conflict of interests.

Course details

- 3-module course with a course certificate
- 7 experts in publication ethics, including a member of Springer Nature's Research Integrity Group, a Nature Portfolio journal Chief Editor, Caltech's Chief Research Policy Officer, an experienced researcher and an elected member of the Committee on Publication Ethics (COPE) Council
- 8 hours of learning
- 10-40 minute lessons
- English language subtitle with transcripts

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Research Integrity: Publication Ethics

Published October 2023 | Write and publish

Researchers will learn

- Select a reputable journal and locate editorial policies and ethical guidance
- Maintain image and data integrity and availability
- Reuse material with appropriate permissions
- Properly cite your own work and that of others
- Avoid common authorship disputes
- Make relevant declarations about your research and publication, including conflicts of interest
- Appropriately navigate revisions
- Address post-publication issues

Benefits for institutions

- Improve the speed at which your researchers are able to publish their findings as they are better equipped to navigate the ethical issues in the publishing process and are less likely to make mistakes
- Improve the reputation of your institution by ensuring your researchers are publishing their research with integrity
- Support the professional and career development of your researchers while saving staff time on training

Research Integrity: Publication Ethics

Published October 2023 | Write and publish

Module 1: Preparing to publish with integrity

- Welcome to this course
- About this course
- Identify a reputable journal
- Publish with integrity
- Module summary

Module 2: Publication ethics during manuscript preparation

- Introduction
- Publish with transparency
- Uphold image integrity
- Ensure data integrity and availability
- Reuse materials with relevant permissions
- Reuse materials appropriately
- Ensure accurate citations and avoid plagiarism
- Consider your author list
- Confirm your research declarations
- Verify your publication declarations
- Module summary

Module 3: Publication ethics after submission

- Introduction
- Navigating manuscript revisions
- Handle post-publication issues
- Module summary
- Course summary

Research Integrity: Publication Ethics

Published October 2023 | Write and publish

Expert panel

International team of research integrity experts and a Nature Portfolio journal Chief Editor who all have extensive experience in dealing with publication ethics

Grace Fisher-Adams
Chief Research Policy Officer, CalTech

Christina Kary
Chief Editor, *Nature Cell Biology*

Jigisha Patel
Founder, Jigisha Patel Research Integrity

Tamara Welschot
Head of Research Integrity, Prevention, Springer Nature

Research Integrity: Publication Ethics

Published October 2023 | Write and publish

Interviewees

This course contains additional insights on publication ethics through video interviews from:

Ben de Haas
ERC Group Leader, Justus-Liebig University Giessen

Rafal Marszalek
Chief Editor, *Scientific Reports*

Angelina Storti
Editorial Rights Director, Springer Nature

Effective Science Communication

Published June 2023 | Share and disseminate

About this course

Knowing how to effectively communicate research with non-experts requires a certain skill set that can be learned and developed with practice. This course will provide researchers with the core tools and techniques to help them communicate any piece of research, published or unpublished, to a variety of different audiences. It covers the essential steps including identifying communication goals, understanding different audiences, and crafting a key message. The course also explores the different communication methods and channels available.

Course details

- 1 module course with a course certificate
- 8 experts in science communication, science writing and editing, science outreach, engagement and presentations, and press releases
- 6.5 hours of learning
- 10 - 30 minute lessons
- English language subtitles and transcripts

Effective Science Communication

Published June 2023 | Share and disseminate

Researchers will learn to

- Compare the requirements of different audiences, to help you tailor your communication
- Select a relevant channel for a particular instance of science communication
- Understand how storytelling techniques can build a compelling scientific story to communicate your research
- Apply strategies to help you communicate your research in an accessible and persuasive way to a non-scientific audience
- Tips and techniques for communication your research via writing, public talks and presentations, social media and media interviews

Benefits for institutions

- Improve the communication skills of researchers at your institution so they feel confident and empowered to engage with a multitude of stakeholders
- Improve the reputation of your institution by ensuring your researchers can enable informed decision-making, increase trust in science, influence behaviour and inspire the next generation
- Support the professional and career development of your researchers while saving staff time on mentoring and training.

Effective Science Communication

Published June 2023 | Share and disseminate

Module 1: Effective Science Communication

- Welcome to the course
- About this course
- Set your communication goals
- Understand your audience
- Reach your audience
- Identify your key message
- Build on your key message to create a story
- Apply strategies to communicate science to non-specialists
- Write about your research
- Present your research
- Communicate your research on social media
- Discuss your research in a media interview
- Course summary

Effective Science Communication

Published June 2023 | Share and disseminate

Expert panel

The course was developed and refined by an expert panel of award-winning science communicators

Laura Helmuth
Editor-in-Chief,
Scientific American

Alok Jha
Science and technology editor, *The Economist*

Suze Kundu
Director of Researcher and Community Engagement, Digital Science

Effective Science Communication

Published June 2023 | Share and disseminate

Interviewees

The course contains additional insights from other researchers, science communicators and press experts through video interviews with:

Lisa Boucher
Press manager, *Nature*

Patience Kiyuka
Research scientist, Kenya Medical Research Institute

Isobel Lisowski
Press officer, *Nature*

Agostina Mileo
Science communicator and activist, EcoFeminita

Subhra Priyadarshini
Chief Editor, *Nature India*

Getting an Academic Research Position

Published March 2023 | Develop your career

About this course

This course equips you with all the tools you need to make rational, informed decisions about the next stage of your career. It will help you pursue your ambitions in a well-prepared, effective manner that will give you the best possible chance of success.

Course details

- 4-module course with a course certificate
- 11 experts in research career development including experienced academic researchers, Nature Portfolio journal Editors, and coaching and careers specialists
- 9 hours of learning
- 10-30 minute lessons
- English language subtitles and transcripts

Getting an Academic Research Position

Published March 2023 | Develop your career

Researchers will learn

- Understand how to find potential career opportunities that align with your personal attributes, desires, and goals
- Learn how to apply for positions in a way that will highlight your strongest attributes and most relevant qualities
- Learn how to present yourself authentically and effectively during all stages of the interview process
- Understand how to assess whether a job you are offered is suitable and choose between competing job offers

Benefits for institutions

- Improve the quality of internal applications from researchers at your institution as they progress in their careers
- Improve the reputation of your institution by ensuring your researchers gain highly regarded positions
- Support the professional and career development of your researchers while saving staff time on mentoring and training

Getting an Academic Research Position

Published March 2023 | Develop your career

Module 1: Exploring your values, interests, skills and career goals

- Welcome to this course
- About this course
- The importance of self-reflection
- Establish your values
- Examine your interests
- Identify your skills
- Consider your personal and practical priorities
- Set your goals
- Module summary

Module 2: Finding a research position

- Introduction
- Build your professional profile
- Find postdoc and faculty opportunities
- Understand the role and requirements
- Choose which opportunities to apply to
- Module summary

Module 3: Applying for a research position

- Introduction
- Prepare for the application process
- Compile your CV
- Write and format your CV
- Prepare your academic cover letter
- Prepare supplementary materials
- Apply for the position
- After the application
- Module summary

Module 4: Excelling at the interview

- Introduction
- Interview preparation: Logistics and questions
- Interview preparation: Presentations and meetings
- Attending the interview
- After the interview
- Handling an offer
- Module summary
- Course summary

Getting an Academic Research Position

Published March 2023 | Develop your career

Expert panel

International team of researchers and Nature Portfolio journal Editors with extensive experience and expertise in career development

Hanah Margalit
Professor, The Hebrew University of Jerusalem

David Payne
Managing Editor, Career and Supplements, *Nature*

Gaynor Roberts
Head of Continuing Professional Development, Springer Nature

Liane Sui Slaughter
Career and Communication Coach, Clear Water Science Consulting

Laura Stark
Director of Graduate Career Services, Graduate School of Arts and Sciences, Harvard University

SPRINGER NATURE GROUP

Getting an Academic Research Position

Published March 2023 | Develop your career

Interviewees

The course contains additional insights from other researchers through video interviews with:

Nowsheen Goonoo
Postdoctoral Research Fellow, University of Mauritius

Antentor "AJ" Othrell Hinton Jr
Investigator and Assistant Professor, Vanderbilt University

Jack Leeming
Senior Editor, Careers, *Nature*

Mark Richards
Senior Teaching Fellow, Imperial College London

C. Daniela Robles-Espinoza
Assistant Professor, National Autonomous University of Mexico

Meng How Tan
Associate Professor, Nanyang Technological University

Experiments: From Idea to Design

Published December 2022 | Design research

Design research | Secure funding | Experiment and analyse | Write and publish | Share and disseminate | Develop your career

About this course

This course equips you with the right tools to help develop, plan, and refine robust, impactful experiments. You will cover all the core concepts of experimental design and discover strategies to complete the full process of developing a research motivation, formulate hypotheses, assembling an experimental plan and utilising it.

Course details

- 4-module course with a course certificate
- 9 experts in experimental design including experienced researchers and Nature Portfolio Journal Editors
- 8.5 hours of learning
- 10-30 minute lessons
- English language subtitles and transcripts

Experiments: From Idea to Design

Published December 2022 | Design research

Researchers will learn

- Explore the characteristics of robust experimental design
- Understand the benefits of honing your experimental design skills before embarking on full-scale experiments
- How to develop a thoughtful and novel motivation for your research
- How to select the precise methods, tools, techniques and protocols to address your research motivation
- How to refine and make use of your experimental design

Benefits for institutions

- Help your researchers design experiments that address novel research motivations using the best-suited methods that foster the reputation of your institute to produce state of the art research
- Help your researchers to increase their and your visibility by sharing their experimental designs with the scientific community
- Support the professional and career development of your researchers while saving staff time on mentoring

Experiments: From Idea to Design

Published December 2022 | Design research

Module 1: Foundations of experimental design

- Welcome to the course
- About this course
- The scientific method
- Robust experimental design advances your field of research
- Thoughtful research motivations for impactful experiments
- Module summary

Module 2: Developing your motivation, assumptions and hypotheses

- Introduction
- Explore potential research motivations
- Select a research motivation that matches you
- Refine your research motivations
- Identify assumptions, formulate hypotheses and make predictions
- Module summary

Module 3: Assembling your experimental plan

- Introduction
- Set up key variables
- Plan your replicates, controls and validations
- Select your methods, tools and techniques
- Choose your protocols
- Navigate resources, regulations and data processing
- Module summary

Module 4: Utilising your experimental design

- Introduction
- Seek feedback to refine your experimental design
- Check your design through preliminary experiments
- Share your experimental design
- Module summary
- Course summary

Experiments: From Idea to Design

Published December 2022 | Design research

Expert panel

We created this course with an international team of researchers and *Nature Portfolio* journal Editors with extensive experience and expertise in the scientific method and designing experiments

Massimiliano Di Ventra
Professor, University of California, San Diego
Theoretical physicist and author on the scientific method

Alison Doerr
Chief Editor, *Nature Methods*
Editorial insights on experimental design and methods papers

Liu Bin
Professor and Senior Vice Provost, National University of Singapore
Researcher in chemistry. Clarivate Highly Cited Researcher

Oliver Graydon
Chief Editor, *Nature Photonics*
Editorial insights on experimental design

Ülo Niinemets
Professor and Head of the Chair, Estonian University of Life Sciences
Researcher in plant science. Clarivate Highly Cited Researcher

Experiments: From Idea to Design

Published December 2022 | Design research

Interviewees

The course contains additional insights from a Nature Portfolio journal Chief Editor and researchers from the fields of meteorology, physics and earth sciences with extensive expertise in designing experiments and developing protocols

David Lapola
Research Scientist, University of Campinas
Researcher in meteorology whose experiments are field based

Melanie Clyne
Chief Editor, *Nature Protocols*
Editorial insights on experimental design and protocol papers

Yuan Cao
Junior Fellow, Harvard University
Researcher in condensed-matter physics. Named one of the *Nature 10* in 2018

Oliver Warr
Research Associate, University of Toronto
Researcher in earth sciences whose experiments are field based

Finding Funding Opportunities

Published September 2022 | Secure funding

About this course

'Finding Funding Opportunities' provides researchers with the skills needed to identify their professional and personal circumstances as well as research needs and to find and prioritize funding opportunities that best fit their requirements and expertise.

Course details

- 3.5 hours of learning with a course certificate
- 3 hours of optional portfolio activities
- 8 lessons
- 10-30-minute lessons
- English language subtitles and transcripts

Finding Funding Opportunities

Published September 2022 | Secure funding

Researchers will learn

- The funding landscape and the benefits of searching for and prioritising the best-fitting funding opportunities
- How to analyse your funding requirements while considering your personal and professional circumstances
- Strategies to find and keep track of suitable funding opportunities
- How best to shortlist different funding opportunities
- Strategies to prioritise and select those opportunities that best fit your needs

Benefits for institutions

- Secure increased resources for your institution and researchers by helping your researchers select the most suitable funding opportunities to apply to
- Improve the efficiency of your researchers during their search for funding
- Support the professional and career development of your researchers while saving staff time on mentoring

Finding Funding Opportunities

Published September 2022 | Secure funding

Module 1: Finding Funding Opportunities

- Welcome to this course
- About this course
- Understanding the funding landscape
- Identify your circumstances and research needs
- Search for funding opportunities
- Create your shortlist
- Choose the best funding for you
- Course summary

Finding Funding Opportunities

Published September 2022 | Secure funding

Expert panel

This course contains insights from experts with wide-ranging experience in finding funding opportunities, including: Research management, a former Program Director at the National Science Foundation (NSF), experienced researchers in synthetic biology, radio astronomy, botany and geochemistry

Richard McCourt
Professor, Drexel University
Former Programme Director, National Science Foundation
Former funding body Programme Director

Eriko Takano
Professor of Synthetic Biology, University of Manchester
Researcher in biochemistry, secured funding in 3 countries

Rianna Coetsee
Research Management and Training Consultant, South Africa
Trainer and consultant in securing funding

Finding Funding Opportunities

Published September 2022 | Secure funding

Interviewees

The course contains additional insights from other researchers with vast experience in identifying funding opportunities

Liane Benning
Professor of Interface Geochemistry, German Research Center for Geosciences
Researcher in earth sciences - secured funding in 3 countries

Cristina Romero-Cañizales
Postdoctoral fellow, Academia Sinica Institute of Astronomy and Astrophysics
Researcher in astronomy - secured funding in 3 countries

Interpreting Scientific Results

Published June 2022 | Experiment and analyse

About this course

The course is aimed at all researchers in the natural sciences who want to develop their skills in adequately interpreting results. It provides the knowledge, life-long practical skills and confidence required to address their scientific question, contextualise their findings to understand the bigger picture, and understand what they bring to their scientific field, and write an interpretation with a focus on their key message.

Course details

- 1-module course with a course certificate
- 5 experts in interpreting results including a Nature Portfolio journal Editor, and experienced researchers, statisticians and data scientists.
- 3 hours of learning
- 10-20-minute lessons
- English language subtitles and transcripts

Interpreting Scientific Results

Published June 2022 | Experiment and analyse

Researchers will learn

- Recognise and avoid the most common pitfalls when interpreting results
- Understand the steps they can take if their results are unexpected
- Address their research aims, contextualise their findings and understand how they advance their scientific field
- Communicate their findings with a focus on your key message

Benefits for institutions

- Maximise the outputs of the researchers at your institution as their results interpretation becomes more effective
- Improve the reputation of your institution by ensuring the efficiency, efficacy, and reliability of your results interpretation and that your researchers know how to adequately interpret results
- Support the professional and career development of your researchers while saving staff time on mentoring

Interpreting Scientific Results

Published June 2022 | Experiment and analyse

Module 1: Interpreting Scientific Results

- Welcome to this course
- About this course
- Understand your findings
- Identify your key message
- Address your research aims
- Test your hypothesis
- Put your findings into context
- Get constructive feedback from others
- What to include in your interpretation
- Build your interpretation
- Adapt your interpretation
- Course summary

Interpreting Scientific Results

Published June 2022 | Experiment and analyse

Expert panel

We created this course with an international team of researchers and Nature Portfolio journal Editors with extensive experience and expertise in data analysis

Mark Gardener
Ecologist, lecturer and author, DataAnalytics.org.uk
Trainer in data analysis

Bhramar Mukherjee
Professor and Chair of Statistics, University of Michigan
Researcher in statistics

Andrea Taroni
Chief Editor, *Nature Physics*
Editorial perspective on interpreting results

Interpreting Scientific Results

Published June 2022 | Experiment and analyse

Interviewees

The course contains additional insights from other researchers with vast experience in interpreting results

C. Daniela Robles-Espinoza
Assistant Professor,
National Autonomous
University of Mexico
Researcher in
bioinformatics and genetics

Yiming Wang
Research Scientist, Max
Planck Institute for the
Science of Human History
Biogeochemist and
paleoclimate scientist

Data Analysis: Conducting and Troubleshooting

Published March 2022 | Experiment and analyse

About this course

'Data Analysis: Conducting and Troubleshooting' introduces the key concepts, processes and methodologies of effective data analysis during research projects. In this course you will discover how conducting effective data analysis will benefit your research and career, and learn how to implement best practices in order to maximise the outputs of your research.

Course details

- 3 interactive modules made up of 10-20-minute lessons
- 5 hours of learning
- Developed by 2 Nature Portfolio editors and 8 experts in data analysis including experienced statisticians and data scientists
- English language subtitles and transcripts
- Certificate of completion

Data Analysis: Conducting and Troubleshooting

Published March 2022 | Experiment and analyse

Researchers will learn

- The importance of conducting effective data analysis
- The best tools for exploring various datasets
- The range of analytical methods available and which one are most suited to their data
- Strategies for obtaining feedback, troubleshooting and expressing the limitations of their analysis

Benefits for institutions

- Maximise the outputs of your researchers as their data analysis becomes more effective and efficient
- Improve the reputation of your institution and reducing risk of reputational damage by ensuring the reliability and reproducibility of data analysis and know that your researchers understand how to plan, prepare and undertake their data analysis
- Support the professional and career development of your researchers while saving staff time on mentoring and training in data analysis methods

Data Analysis: Conducting and Troubleshooting

Published March 2022 | Experiment and analyse

Module 1: Introduction to Data Analysis

- Welcome to the course
- Key concepts in data analysis
- Why is effective data analysis important?
- Challenges in data analysis
- Module summary

Module 2: Exploring your data and reviewing your analysis plan

- Introduction
- Explore your data numerically
- Explore your data visually
- Review your data analysis options and plan
- Module summary

Module 3: Analysing your data

- Introduction
- Analyse your data and test your hypothesis
- Confirm and troubleshoot analyses
- Present your findings and express limitations
- Module summary
- Course summary

Data Analysis: Conducting and Troubleshooting

Published March 2022 | Experiment and analyse

Expert panel

We created this course with an international team of researchers and Nature Portfolio journal Editors with extensive experience and expertise in data analysis

Mark Gardener
Ecologist, lecturer and author, DataAnalytics.org.uk
Trainer in data analysis

João Monteiro
Chief Editor, *Nature Medicine*
Editor in a data heavy field

Bhramar Mukherjee
Professor and Chair of Statistics, University of Michigan
Researcher in statistics

Xavier Vilasis Cardona
Professor, Universitat Ramon Llull
Active researcher in data heavy field

Bronwyn Wake
Chief Editor, *Nature Climate Change*
Editor
Editor in a data heavy field

Data Analysis: Conducting and Troubleshooting

Published March 2022 | Experiment and analyse

Interviewees

The course contains additional insights from other researchers from data-rich fields including physics, medicine, ecology and epidemiology

Marc Amoyel
Senior Research Fellow, University College London
Researcher in cell and developmental biology

Vivian Biancardi Rossato
Postdoctoral Fellow, University of Alberta
Researcher in physiology. Recipient of Med Star award for fellows

Claudia Bonfio
Junior Group Leader, University of Strasbourg
Researcher in origins of life. Winner of the European Young Researchers Award

Alex Dexter
Higher Research Scientist, National Physics Laboratory
Researcher in data heavy field

Isabella Muratore
PhD candidate, University of Boston
Researcher in behaviour. Recipient of Brenton R Lutz award for contribution to her field

Data Analysis: Planning and Preparing

Published December 2021 | Experiment and analyse

About the course

This course introduces the essential elements of robust data analysis during research projects. In this course, you will discover how planning and preparing for data analysis will avoid time-consuming and costly mistakes, benefitting your immediate research and ultimately your reputation and career.

Course details

- 2 interactive modules made up of 10-20-minute lessons
- 4 hours of learning
- Developed by 2 Nature Portfolio editors and 8 experts in data analysis including experienced statisticians and data scientists
- English language subtitles and transcripts
- Certificate of completion

Data Analysis: Planning and Preparing

Published December 2021 | Experiment and analyse

Researchers will learn

- The importance of planning and preparing for data analysis
- The key terms and processes relating to data analysis
- The principles of creating and updating a data analysis plan

Benefits for institutions

- Maximise the outputs of your researchers as their data analysis becomes more effective and efficient
- Improve the reputation of your institution and reducing risk of reputational damage by ensuring the reliability and reproducibility of data analysis and know that your researchers understand how to plan, prepare and undertake their data analysis
- Support the professional and career development of your researchers while saving staff time on mentoring and training in data analysis methods

Data Analysis: Planning and Preparing

Published December 2021 | Experiment and analyse

Module 1: Introduction to Data Analysis and the importance of planning

- Welcome to the course
- Key concepts in data analysis
- Why planning data is important
- Challenges in data analysis
- Challenges in preparing and planning your data analysis
- Creating a data analysis plan
- Module summary

Module 2: Preparing your data for analysis

- Introduction
- Collate your analytic dataset
- Quality check your analytic dataset
- Preliminary analysis: Explore your data
- Module summary

Data Analysis: Planning and Preparing

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Researcher in data heavy field

Isabella Muratore
PhD candidate, University of Boston
Researcher in behaviour. Recipient of Brenton R Lutz award for contribution to her field

Advancing your Scientific Presentations

Published November 2021 | Share and disseminate

About the course

'Advancing Your Scientific Presentations' teaches researchers how to create more memorable and engaging presentations to scientific peers. In the course, researchers will discover how they can develop their research story - the foundation of their presentation - using narrative tools, how to build a slide deck that supports and enhances their presentation and how to prepare to deliver their presentation on the day.

Course details

- 10 hours of learning
- 3 hours of optional portfolio activities
- 4 modules with a course certificate
- 15-minute lessons
- English language transcript

nature masterclasses
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Advancing your Scientific Presentations

Published November 2021 | Share and disseminate

Researchers will learn

- Identify techniques that can help to overcome the challenges that researchers commonly experience when delivering oral presentations
- Learn how to build compelling research stories to use as the foundation for your presentations
- Learn how to create professional slide decks that effectively communicate research findings to your audience
- Learn how to apply strategies to help you deliver your presentation effectively on the day, in both virtual and face-to-face environments

Benefits for institutions

- Maximise the outputs of your researchers as their data analysis becomes more effective and efficient
- Improve the reputation of your institution and reducing risk of reputational damage by ensuring the reliability and reproducibility of data analysis and know that your researchers understand how to plan, prepare and undertake their data analysis
- Support the professional and career development of your researchers while saving staff time on mentoring and training in data analysis methods

Advancing your Scientific Presentations

Published November 2021 | Share and disseminate

Module 1: Overcoming your research presentation challenges

- Welcome to the course
- Identify the benefits of giving effective presentations
- Tailoring to your audience can focus your presentation
- Use narratives tools to communicate your research story
- Module summary

Module 2: Developing the story behind your talk

- Introduction
- Identify your key message
- Select the evidence to support your key message
- Identify your characters
- Choose and use a narrative structure
- Bring the elements of your story together
- Module summary

Module 3: Building an engaging slide deck

- Introduction
- Create the outline of your slide deck
- Set up your slide deck
- Craft your components: Pitfalls, principles and text
- Craft your components: Visual and interactive elements
- Refine and review your slide deck
- Module summary

Module 4: Preparing and navigating your talk

- Introduction
- Prepare the practicalities of your talk
- Prepare and rehearse your talk
- Prepare for Q&A
- Module summary
- Course summary

Advancing your Scientific Presentations

Published November 2021 | Share and disseminate

Expert panel

To ensure that the various elements of developing and delivering a successful scientific presentation to peers are covered in this course, we created the content with Nature Portfolio Editors and internationally renowned experts.

Michael Alley
Engineering Communication Teaching Professor,
Trainer and author in presenting

Shohini Ghose
Professor of Physics and Computer Science, Wilfrid Laurier University
Research and expert speaker

Nolan Haims
Principal, Nolan Haims Creative
Slide deck specialist and trainer

Magdalena Skipper
Editor in chief, *Nature*
Expert communicator

Michael White
Senior Editor, Physical Sciences, *Nature Communications*
expert

SPRINGER NATURE GROUP

Advancing your Scientific Presentations

Published November 2021 | Share and disseminate

Interviewees

The course contains additional insights from other researchers from data-rich fields including physics, medicine, ecology and epidemiology

Beatrice Chiew
Researcher, University of Newcastle
Researcher and expert speaker

Michael Dahlstrom
Director, Greenlee School of Journalism and Communication, Iowa State University
Storytelling expert

Jean-luc Doumont
Founding partner, Principae
Presentations trainer

Richard Goring
Director, Bright Carbon
Slide deck specialist and trainer

Samuel Ramsey
Researcher, USDA-ARS BEe Research Laboratory
Researcher and expert speaker

Networking for Researchers

Published November 2021 | Develop your career

About this course

This course covers the key elements needed to acquire or perfect effective professional networking skills for scientific researchers. In this course you will discover how building a professional network will benefit your research and career, and learn the skills to build and maintain networking connections in a variety of settings, both in-person and online.

Course details

- 8 hours of learning
- 4 hours of optional portfolio activities
- 4 modules
- 10-15 minute lessons
- English language subtitles and transcripts
- Certificate of completion

Networking for Researchers

Published November 2021 | Develop your career

Researchers will learn

- The theory behind and the importance of networking, and how to use your research and career goals to guide you to find appropriate networking opportunities
- How to research and prepare key resources to help you build an effective network
- Strategies to approach and connect with potential contacts, and how to follow up – both in person and online
- Strategies for nurturing your networking contacts, and how to leverage them to advance your research and career

Benefits for institutions

- Help your researchers collaborate, by giving them the skills to identify and connect with potential collaborators in their field and beyond.
- Improve your institution's reach, by helping your researchers make new contacts and disseminate their work.
- Support the professional and career development of your researchers, while saving staff time on mentoring and training in professional networking.

Networking for Researchers

Published November 2021 | Develop your career

Module 1: Why Network?

- Welcome to the course
- Networking challenges and conversations
- Why network
- Networking opportunities
- Module summary

Module 2: Getting ready to network

- Introduction
- Articulate your professional identity
- Build your online presence
- Do your research
- Prepare your pitch and your questions
- Module summary

Module 3: Connect with networking contacts - in person and online

- Introduction
- Reaching out to a new contact
- Crafting your communications for maximum effect
- Meeting in person
- Meeting online
- Making the most out of chance encounters
- Module summary

Module 4: Nurturing and harnessing the power of your network

- Introduction
- Harness the immediate power of your network
- Nurture your network for the future
- Module summary
- Course summary

Networking for Researchers

Published November 2021 | Develop your career

Expert panel

We created this course with an international team of researchers and *Nature Portfolio* journal Editors with wide-ranging experience in networking, including setting career goals, evaluating current networks, identifying networking opportunities, studying social networks and leveraging networks to advance your research and career

Sarah Blackford
Academic Career Consultant and Honorary Teaching Fellow, Lancaster University

Ben Johnson
Head of Communities & Engagement , Magazine Editor, *Nature Medicine*

Tanya Menon
Professor of Management and Human Resources, Ohio State University

David Payne
Managing Editor, Careers and Supplements, Springer Nature

Despina Sanoudou
Associate Professor, National and Kapodistrian University of Athens & Academy of Athens

SPRE GROUP

Networking for Researchers

Published November 2021 | Develop your career

Interviewees

The course contains additional insights from

Paige Brown Jarreau
VP of Science Communication, LifeOmic | Co-founder of Lifeology.io

Emma Chapman
Lecturer, University of Nottingham

Neta Erez
Chair, Department of Pathology, Sackler Faculty of Medicine, Tel Aviv University, Israel

Edmond Sanganyado
Associate Professor, Shantou University and President, Zimbabwe Young Academy of Sciences

Lucy A. Taylor
Junior Research Fellow, Christ Church College and Department of Zoology, University of Oxford

Persuasive Grant Writing

Published October 2021 | Secure funding

Design research | **Secure funding** | Experiment and analyse | Write and publish | Share and disseminate | Develop your career

About this course

Persuasive grant writing explains how to use narrative tools to create grant applications that resonate with the audience - your chosen funder. In the course, you will discover how narrative tools can improve the quality of your grant applications, how understanding your funder will help you align your research question with their objectives and how to apply narrative tools across your grant applications to make them more informative and persuasive.

Course details

- 3-module course with a course certificate
- 9 experts in grant writing including researchers, program officers from funding bodies and the Chief Editor of the Nature Research Editing Service
- 7.5 hours of learning
- 15-minute lessons
- English language subtitles and transcripts

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Persuasive Grant Writing

Published October 2021 | Secure funding

Researchers will learn

- How narrative tools can improve the quality of your grant applications
- To align their grant proposal with the requirements and objectives of their chose funder
- How to apply narrative tools when writing their grant proposal to make it more informative, persuasive and engaging

Benefits for institutions

- Improve the visibility and reputation of your institution by ensuring more persuasive and compelling grant applications
- Secure increased resources for your institution and researchers through more effective grant applications
- Support the professional and career development of your researchers while saving staff time on mentoring and training in grant writing

Persuasive Grant Writing

Published October 2021 | Secure funding

Module 1: Before starting your grant application

- Welcome to the course
- Why are many grant applications not funded?
- Why use narrative tools when writing a grant application?
- The format of grant application and the purpose of its sections
- Module summary

Module 2: Targeting your audience

- Introduction
- Why should you understand your funder?
- How to research your funder?
- Create a message that is relevant to your funder
- Module summary

Module 3: Creating a narrative

- Introduction
- Support your key message
- Select the characters of your grant application
- Create a narrative structure within your sections
- Tell your research story throughout the entire application
- Module summary
- Course summary

Persuasive Grant Writing

Published October 2021 | Secure funding

Expert panel

To ensure that the various perspectives of the funding landscape (eg, the researcher, the funder, the reviewer) and storytelling are covered in this course, we developed the content together with several experts:

Kylie Ball
Professor, School of Exercise and Nutritional Science, Deakin University and Founder and Director, Indago Academy

Michael Dahlstrom
Director, Greenlee School of Journalism and Communication, Iowa State University
Storytelling expert

Peter Gorsuch
Chief Editor and Product Manager, *Nature Research Editing Service*

Richard McCourt
Professor, Department of Biodiversity, Earth & Environmental Science, Drexel University and former Program Director, National Science Foundation

Julienne Stroeve
Professor, Department of Environment and Geography, University of Manitoba

Persuasive Grant Writing

Published October 2021 | Secure funding

Interviewees

The course contains additional insights from experts with wide-ranging experience in grant writing, which includes Writing and editing grant applications, Securing grant funds for research projects, Reviewing grant applications, Using narrative techniques in science communication.

Jingmei Li
Group Leader, Genome Institute of Singapore

Judy Omumbo
Senior Manager, Postdoctoral Programs, Science for Africa Foundation

Taiichi Otsuji
Professor, Tohoku University and Senior Program Officer, Research Center for Science Systems, Japan Society for the Promotion of Science

Qilei Song
Senior Lecturer, Imperial College London

Narrative Tools for Researchers

Published November 2020 | Share and disseminate

About this course

This course explains how to use narrative techniques to help you communicate your research to the scientific community in an effective, compelling and memorable way.

Course details

- 8.5 hours of learning
- 4 hours of optional portfolio activities
- 3 module course with certificate
- 10- to 15-minute lessons
- English language transcript

Narrative Tools for Researchers

Published November 2020 | Share and disseminate

Researchers will learn

- The benefits of using a compelling story to communicate your research to your peers and stakeholders, such as funders or industry partners
- How to build and combine different narrative elements that can help you create a more compelling scientific story
- How to tailor the details of your story according to the needs and expectations of your audience
- How to refine your story by soliciting feedback and implementing edits

Benefits for institutions

- Improve the quality of the outputs from researchers at your institution, including papers, talks and grant applications
- Increase the visibility and reputation of your institution by ensuring more convincing and memorable dissemination of your researchers' findings
- Make finding collaborations with other institutions and with industry easier as your researchers learn to articulate their research goals in an inspirational and impactful manner

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Narrative Tools for Researchers

Published November 2020 | Share and disseminate

Module 1: Why use a story?

- Welcome to the course
- Why use narrative tools to communicate your research?
- How can stories advance your research and career?
- Why are stories powerful?
- What makes a story?
- Module summary

Module 2: Building your story

- Introduction
- Identify your key message
- Back up your key message
- Choose a structure for your story
- Build your characters
- Help the audience along
- Put the pieces together
- Module summary

Module 3: Refining your story

- Introduction
- Understand your audience
- Adapt to your audience
- Plan for constraints
- Edit your story
- Module summary
- Course summary

Narrative Tools for Researchers

Published November 2020 | Share and disseminate

Expert panel

We created this course with an international team of researchers and Nature Portfolio journal Editors with extensive experience and expertise in the role of narrative tools in science communication, science journalism, training scientists in communicating through storytelling techniques, sharing their own research through compelling stories and papers.

Michael Dahlstrom
Director, Greenlee School of Journalism and Communication, Iowa State University

Nick Enfield
Professor of Linguistics, University of Sydney

Pep Pamies
Chief Editor, Nature Biomedical Engineering

Helen Pearson
Chief Magazine Editor, Nature

Narrative Tools for Researchers

Published November 2020 | Share and disseminate

Interviewees

The course contains additional insights from other researchers:

Mahaletchumy Arujanan
Global Coordinator, International Service for the Acquisition of Agribiotech Applications

Sara ElShafie
Founder, Science Through Story and PhD Candidate, University of California, Berkeley

Josh Ettinger
PhD candidate, Environmental Change Institute, University of Oxford

Erich Jarvis
Professor, The Rockefeller University and Investigator, Howard Hughes Medical Institute

Faith Osier
Professor of Immunology, Heidelberg University Hospital

Vidita Vaidya
Professor of Neurobiology, Tata Institute of Fundamental Research

Managing Research Data to Unlock its full Potential

Published September 2020 | Experiment and analyse

About this course

'Managing Research Data to Unlock its Full Potential' covers the key elements of effective data management during research projects. In this course you will discover how good data management will benefit your research and career, and learn how to implement best practices in research data management in order to maximise the outputs of your research.

Course details

- 4-module course with a course certificate
- 10 experts in data management including researchers, funders, data publishing and institutional data management specialists
- 4-5 hours of learning
- 15-minute lessons
- English language subtitles and transcripts

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Managing Research Data to Unlock its Full Potential

Published September 2020 | Experiment and analyse

Researchers will learn

- Why effective data management is beneficial to your research and your career
- How to create and maintain a data management plan
- How to apply best practices for organising, storing, archiving and quality checking your data
- How to ensure that your data is understandable to yourself and others
- The pros and cons of different options for sharing your data

Benefits for institutions

- Maximise the outputs of your institution as research data becomes easier to use and reuse efficiently
- Increase the visibility of your institution with research data that is more findable and more widely shared
- Improve the reputation of your institution by ensuring the reproducibility of your datasets and that your researchers know how to find and comply with research data policies
- Support the professional and career development of your researchers while saving staff time on mentoring and training in data management methods

Managing Research Data to Unlock its full Potential

Published September 2020 | Experiment and analyse

Module 1: Welcome and introduction

- Welcome to the course
- Key concepts
- Why data management matters
- Complying with relevant data policies
- Module summary

Module 2: Creating and maintaining your data management plan

- Introduction
- Preparing to create a DMP
- Creating a DMP
- Module summary

Module 3: Managing data in the short and long term

- Introduction
- Storing data for the short term
- Choosing file formats for data storage
- Organising and naming your data files
- Collecting rich and comprehensible metadata
- Checking the quality of your data
- Storing data for the long term
- Module summary

Module 3: Sharing your data

- Introduction
- What to share, when and with whom?
- Setting terms for access and use of your data
- How to share your data
- Sharing your data in a repository
- Module summary
- Course summary

Managing Research Data to Unlock its full Potential

Published September 2020 | Experiment and analyse

Expert panel

This course has been created with an international team of experts with a wide range of experience, including:

Grace Baynes
VP, Research Data and New Product Development, Research Solutions, SPringer Nature

Helena Cousijn
Community Engagement Director, DataCite

Rebecca Grant
Research Data Manager, Research Solutions, Springer Nature

Varsha Khodiyar
Data Curation Manager, Springer Nature

Paola Quattroni
Research Funding Manager (Data), Cancer Research UK

Managing Research Data to Unlock its full Potential

Published September 2020 | Experiment and analyse

Interviewees

The course has additional insights through video interviews from:

Lorretta Favour C. Ntoimo
Department of Demography and Social Statistics, Federal University Oye-Ekiti

John VanDecar
Senior Editor, *Nature*

Muliaro Wafula
Associate Professor and DIrector, ICT Centre of Excellence and Open Data iCEOD, Jomo Kenyatta University for Agriculture and Technology

Lynn Woolfrey
DataFirst, University of Cape Town

Introduction to Collaboration

Published September 2019 | Work with others

Design research | Secure funding | Experiment and analyse | Write and publish | Share and disseminate | Develop your career | Work with others

About the course

'Introduction to Collaboration' introduces the idea of research collaboration and how becoming a more effective collaborator could help to further both your research and your career. Even if you've already participated in collaborative research, this course provides a useful introduction to the topic of research collaboration, as well as valuable context and advice around the pros and cons of collaborative projects and how they can help you reach your goals.

Course details

- One-module course with certificate
- 17 experts in collaboration including researchers, funders, editors and professionals
- 2.5 hours of learning
- 15-minute lessons
- English language subtitles and transcripts

Introduction to Collaboration

Published September 2019 | Work with others

Researchers will learn

- Why collaborative research is becoming more prevalent
- The pros and cons of collaborating
- The specifics of collaborating with industry
- How collaborative projects can help advance your research and career

Benefits for institutions

- Improve the quality of your institution's research with access to additional expertise and equipment through collaboration
- Increase the visibility of your institution's research by publishing impactful collaborative work
- Align with funder programs as they develop dedicated funding opportunities for collaborative efforts

Introduction to Collaboration

Published September 2019 | Work with others

Module 1: Why collaborate?

- Welcome to the course
- The rise of collaborations
- Different types of collaboration
- Benefits and challenges of collaboration
- Working with industry
- Use collaborations to reach your goals
- Module summary

Introduction to Collaboration

Published September 2019 | Work with others

Expert panel

We created this course with an international team of researchers and Nature Portfolio journal Editors with extensive experience

Tulika Bose
Professor of Physics, University of Wisconsin-Madison

Luke Fleet
Senior editor and team leader, *Nature*, Springer Nature

Mark Hahnel
Founder, Figshare

W. John Kao
Chair Professor of Translational Medical Engineering, The University of Hong Kong

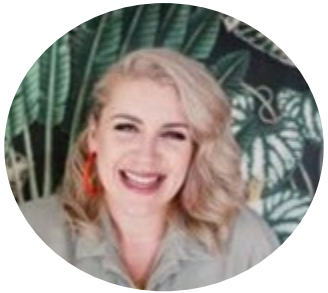
Pep Pamies
Chief Editor, *Nature Biomedical Engineering*, Springer Nature

Introduction to Collaboration

Published September 2019 | Work with others

Interviewees

The course contains additional insights from other researchers from data-rich fields including physics, medicine, ecology and epidemiology



Louise Ashton
Assistant Professor, School of Biological Sciences, The University of Hong Kong

J. Michael Cherry
Professor of Genetics, Stanford University

Adriane Esquivel Muelbert
Research Fellow, University of Birmingham

Brian Nosek
Executive Director, The Center for Open Science

George Pankiewicz
Unified Model Partnerships Manager, Met Office

Participating in a Collaboration

Published September 2019 | Work with others

Design research | Secure funding | Experiment and analyse | Write and publish | Share and disseminate | Develop your career | Work with others

About the course

'Participating in a Collaboration' focuses on how to ensure you make a meaningful contribution when you join a collaborative project. The course will help to equip you with the knowledge and skills you need to become an effective and valuable member of the team. This course is particularly suited to researchers who have little or no experience in working collaboratively.

Course details

- One-module course with certificate
- 16 experts in collaboration including researchers, funders, editors and professionals
- 5 hours of learning
- 15-minute lessons
- English language subtitles and transcripts

Participating in a Collaboration

Published September 2019 | Work with others

Researchers will learn

- Strategies for working in a new research team
- Key collaborative skills such as dividing tasks, managing your time, and communicating efficiently
- Tools to help you collaborate
- How to plan to maximise the skills, ideas and contacts you'll gain from collaborating
- How to overcome possible roadblocks when participating in collaborative projects

Benefits for institutions

- Improve the quality of your institution's research with access to additional expertise and equipment through collaboration
- Increase the visibility of your institution's research by publishing impactful collaborative work
- Align with funder programs as they develop dedicated funding opportunities for collaborative efforts

Participating in a Collaboration

Published September 2019 | Work with others

Module 1:Participating in a collaboration

- Welcome to the course
- About this course
- Keeping the project on track
- Working in a new research team
- Tools to collaborate
- Leveraging your collaborative experience
- Troubleshooting tips for new collaborators
- Course summary

Participating in a Collaboration

Published September 2019 | Work with others

Expert panel

We created this course with an international team of researchers and Nature Portfolio journal Editors with extensive experience

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Participating in a Collaboration

Published September 2019 | Work with others

Interviewees

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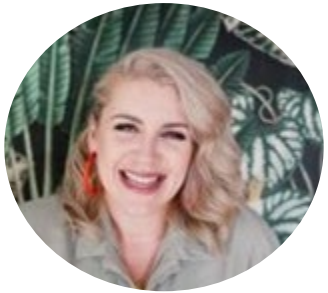

Louise Ashton
Assistant Professor, School of Biological Sciences, The University of Hong Kong

J. Michael Cherry
Professor of Genetics, Stanford University

Adriane Esquivel Muelbert
Research Fellow, University of Birmingham

Brian Nosek
Executive Director, The Center for Open Science

George Pankiewicz
Unified Model Partnerships Manager, Met Office

Leading a Collaboration

Published September 2019 | Work with others

Design research | Secure funding | Experiment and analyse | Write and publish | Share and disseminate | Develop your career | Work with others

About the course

If you already have collaborative experience and are ready to initiate your own research collaboration, ‘Leading a Collaboration’ covers all aspects of setting up, leading, managing and closing down your own collaborative research project.

Course details

- Three-module course with certificate
- 16 experts in collaboration including researchers, funders, editors and professionals
- 11.5 hours of learning
- 15-minute lessons
- English language subtitles and transcripts

Leading a Collaboration

Published September 2019 | Work with others

Researchers will learn

- Identify and approach potential collaborators with the right skills and expertise
- Effective leadership behaviours to drive a successful project
- Set up collaboration agreements, codes of conduct, and project management plans
- Seek and apply for funding for your project
- Keep collaborators motivated, monitor progress, and address delays
- Manage challenges including conflict between collaborators, stress, ethical misconduct, administering shared funds and resources, and going over-budget
- Maximise the outputs, value and impact of your collaboration
- Publishing collaborative papers
- How to wrap-up a collaborative project that has reached its goals, or end a project early if required

Benefits for institutions

- Improve the quality of your institution's research with access to additional expertise and equipment through collaboration
- Increase the visibility of your institution's research by publishing impactful collaborative work
- Align with funder programs as they develop dedicated funding opportunities for collaborative efforts

Leading a Collaboration

Published September 2019 | Work with others

Module 1: Initiating and leading a collaboration

- Do you need a collaboration?
- How to choose your collaborators
- How to approach potential collaborators
- Effective leadership for collaborations
- Setting up a collaboration framework
- Establishing a code of conduct
- Creating the project schedule
- Planning your resources
- Legislation, guidelines and policies
- Funding for collaborations
- Module summary

Module 2: Running and troubleshooting a collaboration

- Maintaining engagement
- Keeping the project on track
- Interpersonal and personnel issues
- Ethical issues
- Funding and resources
- Module summary

Module 3: Outputs and next steps

- Defining ‘outputs’, ‘value’ and ‘impact’
- Collaborative research outputs
- Publishing your results: authorship and writing
- Publishing your results: submission and review
- The value of research outputs
- Assessing and communicating impact
- Ending a collaboration
- Next steps
- Module summary
- Course summary

Leading a Collaboration

Published September 2019 | Work with others

Expert panel

We created this course with an international team of researchers and Nature Portfolio journal Editors with extensive experience:

Tulika Bose
Professor of Physics, University of Wisconsin-Madison

Luke Fleet
Senior editor and team leader, *Nature*, Springer Nature

Mark Hahnel
Founder, Figshare

W. John Kao
Chair Professor of Translational Medical Engineering, The University of Hong Kong

Pep Pamies
Chief Editor, *Nature Biomedical Engineering*, Springer Nature

Leading a Collaboration

Published September 2019 | Work with others

Interviewees

The course contains additional insights from other researchers from data-rich fields including physics, medicine, ecology and epidemiology:

Louise Ashton
Assistant Professor, School of Biological Sciences, The University of Hong Kong

J. Michael Cherry
Professor of Genetics, Stanford University

Adriane Esquivel Muelbert
Research Fellow, University of Birmingham

Brian Nosek
Executive Director, The Center for Open Science

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Focus on Peer Review

Published 2016| Write and publish

About this course

'Focus on Peer Review' is a **free** online training course that will teach researchers the foundations of good peer review.

Course details

- 3.5 hours of learning
- 15-minute lessons
- 4-module course with certificate
- English language transcript and captions

Focus on Peer Review

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Module 1: Your role as peer reviewer

- The peer review process
- The importance of peer review
- The benefits of being a peer reviewer
- Peer reviewers responsibilities
- The reasons why I peer review
- Deciding whether to peer review a paper
- Experiences of peer review
- Routes to becoming a peer reviewer
- Module summary and next steps
- Useful links and further reading

Module 2: The peer review report

- What do you think of this report?
- Preparing to review
- Review strategies
- First impressions of the paper
- How I approach peer review
- The review: Titles, abstracts & introductions
- The review: Methods
- The review: Results and discussion
- The tone of your report
- The structure of your report
- Major and minor points in a review paper
- Writing a summary for a peer review report
- Common problems during peer review
- Frequently asked questions
- Module summary and next steps
- Useful links and further reading

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Module 3: Ethics in peer review

- Which of these actions is ethically questionable?
- Peer review ethics
- Conflicts of interest in peer review
- Intellectual theft and plagiarism in peer review
- Implicit bias in peer review
- Confidentiality in peer review
- Why peer review gets a bad press
- Knowledge check: Potential issues when peer reviewing
- Module summary and next steps
- Useful links and further reading

Module 4: Variations and Innovations in peer review

- Types of peer review
- Registered reports
- Different journals' requirements
- Variations in peer review practices
- Knowledge check: Reviewing large data sets
- Peer reviewing a review paper
- Innovative approaches to peer review
- Peer review: Where next?
- Module summary and next steps
- Useful links and further reading

Focus on Peer Review

Published 2016| Write and publish

Expert panel and interviewees

This course is delivered by 20 Nature Portfolio journal Editors, giving researchers an unparalleled insight into the scientific writing process. Our panel of experts include:

Andrea Aguilar
Publishing Manager Researcher training, Springer Nature

George Booth
Royal Society University Research Fellow, King's College London

Natasha Bray
Associate Editor, *Nature Reviews Neuroscience*

Darren Burgess
Senior Editor, *Nature Reviews Genetics*

Elisa de Ranieri
Editor in Chief, *Nature Communications*

Kyle Legate
Team Manager and Senior Editor, *Nature Communications*

Focus on Peer Review

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Expert panel and interviewees

The course contains additional insights from other researchers through video interviews with:

Federico Levi
Senior Editor, *Nature Physics*

Elizabeth Moylan
Former Senior Editor, Peer Review Strategy and Innovation, *Springer Nature*

Alicia Newton
Former Senior Editor, *Nature Geoscience*

David Rueda
Professor and Chair of Molecular and Cellular Medicine, Imperial College London

Publishing a Research Paper

Published 2015| Write and publish

About this course

'Publishing a Research Paper' focuses on how to submit your research paper, and gives a comprehensive overview of how to navigate the editorial and publishing process, including revisions.

Course details

- 5.5 hours of learning
- 15-minute lessons
- 8-module course with certificate
- English language transcript and captions

Publishing a Research Paper

Published 2015| Write and publish

Researchers will learn

- How to select the most appropriate journal for publication and submit your paper
- How to navigate the editorial process, including how to write cover letters, the peer review process, as well as the different editorial decisions and how to appeal them
- How to include ethical considerations and avoid potential pitfalls

Publishing a Research Paper

Published 2015| Write and publish

Module 1: Authorship and authors' responsibilities

- Welcome to the course
- Principles of authorship
- Author contributions
- Authorship in collaborative teams and consortia
- Knowledge check: Describe authorship
- Knowledge check: Who should be an author?
- Authorship disputes
- Author identity and researcher identifiers
- How to start a conversation on authorship
- An editor's experience: Honorary authors
- Frequently asked questions
- Module summary

Module 2: Selecting a journal for publication

- Poll: Your criteria for selecting a journal
- Key considerations for selecting a journal
- Why and where to publish?
- Publishing in open access journals
- Avoiding predatory journals
- Case study: Bohannon's sting
- Frequently asked question
- Module summary

Module 3: Submitting your paper

- Submitting your manuscript
- Presubmission enquiries at scientific journals
- Scientific cover letters
- An editor's experience: The submission process
- What constitutes a conflict of interest?
- Knowledge check: Conflicts of interest
- Knowledge check: Competing interests
- Frequently asked question
- Module summary

Module 4: Understanding peer review

- A brief history of peer review
- Types of peer review
- The benefits and limitations of peer review
- How editors select referees
- When to accept or decline an offer to peer review
- An editor's experience: Being a first-time peer reviewer
- What makes a great peer review report?
- How to think like a peer reviewer when you read a paper
- How editors assess referee reports
- Rewards for referees
- Frequently asked questions
- Module summary

Publishing a Research Paper

Published 2015| Write and publish

Module 5: Journal decisions

- Types of editorial decisions after peer review
- Common reasons for rejection at scientific journals
- Knowledge check: Editorial decisions
- How to respond to peer review comments
- Making an appeal
- The dos and don’ts of appealing
- What happens after acceptance at Nature Research journals?
- Post-publication criticism
- Module summary

Module 6: The editorial process

- Different editorial processes
- The editorial process at top-tier journals
- Knowledge check: What do editors check for?
- Publishing a paper is a team effort
- Frequently asked questions
- Module summary

Module 7: Measuring impact

- An introduction to research metrics
- Article-level metrics
- Researcher-level metrics
- Focus on the h-index
- Institutional-level metrics
- Knowledge check: Metrics
- Module summary

Module 8: Plagiarism and other ethical issues

- Why some researchers behave unethically
- Defining plagiarism, and tools to detect it
- Knowledge check: Using copyright-protected materials
- Focus on duplicate submissions
- Inappropriate citations
- A case study of misconduct
- Poll: Misconduct – what would you do?
- Post-publication corrections
- Retractions
- Module summary
- Course summary

Publishing a Research Paper

Published 2015| Write and publish

Expert panel

This course is delivered by 11 Nature Portfolio journal Editors, giving researchers an unparalleled insight into the scientific writing process. Our panel of experts include, among others:

Euan Adie
Founder, Altmetric

Gemma Alderton
Former Senior Editor, *Nature Reviews Cancer*

Natascha Bushati
Team Manager and Senior Editor, *Nature Communications*

Elsa Couderc
Senior Editor, *Nature Energy*

Kevin Da Silva
Chief Editor, *Nature Neuroscience*

Publishing a Research Paper

Published 2015 | Write and publish

Expert panel

This course is delivered by 11 Nature Portfolio journal Editors, giving researchers an unparalleled insight into the scientific writing process. Our panel of experts also include:

Elisa De Ranieri
Editor in Chief, *Nature Communications*

Ritu Dhand
Nature Editorial Director, Springer Nature

Luke Fleet
Senior Editor, *Nature*

Ed Gerstner
VP Publishing, Nature Research Open Access, Springer Nature

Writing and Publishing a Review Paper

Published 2015| Write and publish

About this course

'Writing and Publishing a Review Paper' focuses on how to write and publish a scientific review paper.

Course details

- 1.5 hours of learning
- 15-minute lessons
- 1-module course with certificate
- English language transcript and captions

Writing and Publishing a Review Paper

Published 2015| Write and publish

Researchers will learn

- What makes a great review paper
- How to plan, structure and write a review - and create a clear and compelling story supported by relevant citations
- How to referee a review

Writing and Publishing a Review Paper

Published 2015| Write and publish

Module 1: Writing and Publishing a Review Paper

- Welcome to the course
- What is a review paper?
- What makes a great review?
- Editors' favourite Nature Reviews papers
- Dos and don'ts for a good review
- Commissioned and unsolicited reviews
- How to write the outline of a review paper
- The structure of a review paper
- Selecting the primary literature for your review paper
- Refereeing review papers
- The editorial process at Nature Reviews journals
- Nature Reviews Disease Primers
- An editor's experience: Submitting a review
- Reflection: Remember an inspiring review
- Frequently asked questions
- Course summary

Writing and Publishing a Review Paper

Published 2015| Write and publish

Expert panel

This course is delivered by 5 Nature Portfolio journal Editors, giving researchers an unparalleled insight into the scientific writing process. Our panel of experts include:

Adam Brotchie
Former Associate Editor, *Nature Reviews Materials*

Darren Burgess
Senior Editor, *Nature Reviews Genetics*

Liesbeth Lieben
Senior Editor, *Nature Reviews Disease Primers*

Claudio Nunes-Alves
Senior Editor, *Nature Microbiology*

Sarah Seton-Rogers
Chief Editor, *Nature Reviews Cancer*