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Scientific Writing and Publishing course: a guide for teaching staff

Nature Masterclasses has developed this content guide for senior university researchers or tutors wishing to use the Scientific Writing and Publishing course as a teaching resource.

IF YOUR RESEARCHERS ARE ABOUT TO PUBLISH A PAPER...

If your researchers are about to publish research or planning to publish their very first paper, head to 'Publishing a Research Paper', **Part 2 of the Scientific Writing and Publishing course**.

Using the table below, jump to the module that matches the stage your researchers are at within the publication process. (Log in to *Nature Masterclasses* using your institution's access method and the link will take you straight to the module)

If your researchers are about to...	Go to module:	What your researchers will learn from the module:	Lessons within the module:
...Publish for the first time	**Module 1** **Authorship and authors' responsibilities**	**Learning outcomes:** • How the line between authorship and acknowledgement can be defined in various situations • To recognize authorship practices that fail to meet acceptable standards of scientific integrity • How to discuss authorship and author order in your team	1. Principles of authorship 2. Author contributions 3. Authorship in collaborative teams and consortia 4. Authorship disputes 5. Author identity and researcher identifiers 6. How to start a conversation on authorship 7. An editor's experience: Honorary authors 8. FAQ 9. Module summary
...Choose a journal in which to publish their paper	**Module 2** **Selecting a journal for publication**	**Learning outcomes:** • What criteria to use when choosing a journal • How the order of priority of these factors may change depending on the situation • How to identify and avoid questionable journals • How to create your own checklist for journal selection	1. Key considerations for selecting a journal 2. Why and where to publish? 3. Publishing in open access journals 4. Avoiding predatory journals 5. Case study: Bohannon's sting 6. FAQ 7. Module summary
...Submit their manuscript	**Module 3** **Submitting your paper**	**Learning outcomes:** • What information is useful for editors when they receive your paper • How to organize this information into a strong cover letter and how to summarize your research without repeating the abstract • Which additional information and documents can be requested by journals at each stage of the process	1. Submitting your manuscript 2. Presubmission enquiries at scientific journals 3. Scientific cover letters 4. An editor's experience: The submission process 5. What constitutes a conflict of interest? 6. FAQ 7. Module summary

...Have their work peer-reviewed	**Module 4** **Understanding peer review**	**Learning outcomes:** • The different models of peer review • How editors select referees • When and how to peer review • The benefits of being a peer reviewer	1. A brief history of peer review 2. Types of peer review 3. The benefits and limitations of peer review 4. How editors select referees 5. When to accept or decline an offer to peer review 6. An editor's experience: Being a first-time peer reviewer 7. What makes a great peer review report? 8. How to think like a peer reviewer when you read a paper 9. How editors assess referee reports 10. Rewards for referees 11. FAQ 12. Module summary
	Focus on Peer Review, the free course from *Nature Masterclasses*, for a deeper dive into peer review		
...Work with editors	**Module 5** **Journal decisions**	**Learning outcomes:** • To distinguish the different types of editorial decisions • To read and interpret editorial decision letters • Wow to prepare a rebuttal and an appeal letter • What happens after acceptance and publication	1. Types of editorial decisions after peer review 2. Common reasons for rejection at scientific journals 3. How to respond to peer review comments 4. Making an appeal 5. The dos and don'ts of appealing 6. What happens after acceptance at Nature Research journals? 7. Post-publication criticism 8. Module summary
	Module 6 **The editorial process**	**Learning outcomes:** • Editorial processes at different journals • The different stages of manuscript handling by editors • How editorial teams work together to make initial decisions on manuscripts • What happens to your article after it is accepted	1. Different editorial processes 2. The editorial process at top-tier journals 3. Publishing a paper is a team effort 4. FAQ 5. Module summary
...Measure the impact of their scientific research	**Module 7** **Measuring impact**	**Learning outcomes:** • What research metrics are • The different levels of metrics (article, author, institution) • How to calculate metrics and how to use them • Limitations of research metrics and how the research community is working to change the metrics landscape	1. An introduction to research metrics 2. Article-level metrics 3. Researcher-level metrics 4. Focus on the h-index 5. Institutional-level metrics 6. Module summary
...Understand how to avoid plagiarism and poor ethical standards in research	**Module 8** **Plagiarism and other ethical issues**	**Learning outcomes:** • The different types of misconduct • Our editors' perspective on specific cases of misconduct • In which circumstances a correction or retraction might be appropriate • Where to look for further information and advice	1. Why some researchers behave unethically 2. Defining plagiarism and tools to detect it 3. Focus on duplicate submissions 4. Inappropriate citations 5. A case study of misconduct 6. Post-publication corrections 7. Retractions 8. Module summary