Science and the Media: Securing the Future
Science and the Media Expert Group, December 2009

Science Journalism, Skills and Training

1. Background
At the first meeting of the Science and Media Expert Group three strands of discussion for future meetings were identified:

• Science journalism, skills and training
• Future of science journalism
• Programming and engagement

This paper sets out the background and current state of play to facilitate discussion for the first strand: Science journalism, skills and training. It summarises what training programmes for current and future science journalists are currently available with detailed information on each aspect contained within the annexes. This information will be discussed on 15\textsuperscript{th} September 2009 and the outcomes of that discussion will be collated to form recommendations to feed into the final action plan from the group.

2. Summary of findings

• Little evidence of explicit on-the-job training on science / science journalism within media organisations
• Lots of undergraduate degrees in journalism but very few have explicit modules focused on science
• There are more journalism courses for those wishing to go into sports journalism than science journalism
• 3 universities run science journalism (or related) masters courses, 8 run science communication masters and 3 run science communication undergraduate degrees
• Little evidence could be found of other credible training providers offering specialist courses in this area. Only the Chartered Institute of Public Relations had an applicable course in \textit{Technical and Science Writing}, although it is pitched at a very basic level.
• Although no evidence could be found for innovative schemes within the UK to allow journalists to learn more about science, there were several fellowship schemes in the US (annex G) as well as shorter initiatives in Europe and the US (annex H), directly aimed at expanding journalists experience of science.
• A brief review of the recent academic literature in this area highlights that there is very little written about science journalism. The dominant themes in academic literature seem to be the public understanding of science, how the media has dealt with particular scientific based stories such as MMR, GM, BSE or hybrid embryos or how scientists should improve communication with the media.

The evidence for these findings, including lists of institutions offering courses, descriptions of the more interesting and innovative schemes and abstracts of the relevant academic articles and papers, are included in the annexes.

\textit{Alexandra Saxon, Freya (SMC Volunteer), Chloe Somers
August 2009}
Annex A – Summary of media organisations in house training

During July 2009, a review of information on media organisations websites alongside telephone research was conducted to establish whether any of these organisations offer science based training to their journalists.

**BBC**
Although the BBC have training programmes, nothing was specifically science based.

- **BBC Training and Development** – none of the journalism training courses are specifically aimed at science journalists. But they do suggest that if none of the courses meet the requirements, specific bespoke training can be commissioned. It is not clear whether any previously commissioned bespoke training courses have been science based.

- **Journalism Trainee Scheme** – On talking to the Director of the scheme, some instances could include science journalism. However, the scheme does not include any specific science journalism training.

**ITV**
There was no clear idea of whether any of the training that they provide includes a science element. On calling ITN, again, there was no clear idea of whether science journalism was a specified area of training for their journalists.

**Channel 4**
Similar to ITV, no clear idea of what the training they provide for their journalists includes. As the Channel 4 news is provided by ITN it is likely that the picture is the same as above.

**Five News**
No specific science training offered. Training was generally in areas like legal training and health and safety. Any other training would be “on the job”.

**Sky News**
Provide “on-the-job training right through to sponsorship of qualifications, supporting accreditation programmes as well as development opportunities like secondments or key projects”, and have an “online development platform where you can download material and book yourself onto courses and workshops”. However, despite phoning for clarification, it was not clear whether any of this training would include science.

**Reuters**
Have a fairly detailed training section on their website about classes and programs for employees, but as with the other organisations, there is no specific detail on whether there is any science content for journalists. The telephone research did not yield any further detail.
Annex B – List of undergraduate degrees in journalism

<table>
<thead>
<tr>
<th>Institution</th>
<th>Offered Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anglia Ruskin</td>
<td>Journalism</td>
</tr>
<tr>
<td>Bangor</td>
<td>English Language and Journalism [English/French/German/History] with Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism and Media Studies</td>
</tr>
<tr>
<td></td>
<td>Journalism with [French/German/Italian/Spanish]</td>
</tr>
<tr>
<td></td>
<td>Spanish with Journalism</td>
</tr>
<tr>
<td>University of Bedfordshire</td>
<td>Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism and Public Relations</td>
</tr>
<tr>
<td></td>
<td>Magazine Journalism</td>
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<tr>
<td></td>
<td>Sport Journalism</td>
</tr>
<tr>
<td>Birmingham City University</td>
<td>Media and Communication (Journalism)</td>
</tr>
<tr>
<td>Blackburn College</td>
<td>Joint honours programme - (Journalism)</td>
</tr>
<tr>
<td></td>
<td>Journalism - foundation degree</td>
</tr>
<tr>
<td></td>
<td>Journalism (top-up)</td>
</tr>
<tr>
<td>Bournemouth University</td>
<td>Multimedia Journalism</td>
</tr>
<tr>
<td>University of Brighton</td>
<td>Sport Journalism</td>
</tr>
<tr>
<td>University of the West of England, Bristol</td>
<td>Various courses and Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism and various courses</td>
</tr>
<tr>
<td>Brunel University</td>
<td>International Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism</td>
</tr>
<tr>
<td>The University of Buckingham</td>
<td>Communication, Media and Journalism</td>
</tr>
<tr>
<td></td>
<td>Economics with Business Journalism</td>
</tr>
<tr>
<td></td>
<td>[English Literature / English Studies / International Studies] with Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism with [Communication Studies / English Literature / International Studies]</td>
</tr>
<tr>
<td>Buckinghamshire New University</td>
<td>Journalism</td>
</tr>
<tr>
<td>Canterbury Christ Church University</td>
<td>Journalism: Multimedia Journalism</td>
</tr>
<tr>
<td>Cardiff University</td>
<td>Journalist</td>
</tr>
<tr>
<td></td>
<td>Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism for Communities - foundation degree</td>
</tr>
<tr>
<td>University of Central Lancashire</td>
<td>Combined Honours Programme - Journalism</td>
</tr>
<tr>
<td></td>
<td>Community Journalism</td>
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<tr>
<td></td>
<td>English Language and Journalism</td>
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<tr>
<td></td>
<td>International Journalism</td>
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<tr>
<td></td>
<td>Journalism</td>
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<tr>
<td></td>
<td>Journalism (Foundation Entry)</td>
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<tr>
<td></td>
<td>Journalism and English Literature</td>
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<tr>
<td></td>
<td>Sports Journalism</td>
</tr>
<tr>
<td>University of Chester</td>
<td>Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism and various courses</td>
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<tr>
<td></td>
<td>Journalism with various courses</td>
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<tr>
<td></td>
<td>Various courses with journalism</td>
</tr>
<tr>
<td></td>
<td>Various courses and journalism (inc. Advertising, events management, Broadcasting and Online Journalism - foundation degree</td>
</tr>
<tr>
<td>City University</td>
<td>Creative Industries</td>
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<tr>
<td></td>
<td>Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism/Economics</td>
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<tr>
<td></td>
<td>Journalism/Psychology</td>
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<tr>
<td></td>
<td>Journalism/Sociology</td>
</tr>
<tr>
<td></td>
<td>(Can do as sandwich courses)</td>
</tr>
<tr>
<td>Cornwall College</td>
<td>Newspaper &amp; Magazine Journalism - foundation degree</td>
</tr>
<tr>
<td>Coventry University</td>
<td>English and Journalistic Studies</td>
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<tr>
<td></td>
<td>Journalism and English</td>
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<tr>
<td></td>
<td>Journalism and Media</td>
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<tr>
<td>University for the Creative Arts</td>
<td>Fashion Journalism</td>
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<td></td>
<td>Journalism</td>
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<tr>
<td></td>
<td>Leisure Journalism</td>
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<tr>
<td></td>
<td>Motoring Journalism</td>
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<tr>
<td></td>
<td>Music Journalism</td>
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<tr>
<td></td>
<td>Sports Journalism</td>
</tr>
<tr>
<td>University of Cumbria</td>
<td>Journalism</td>
</tr>
<tr>
<td></td>
<td>Journalism for Communities - foundation degree</td>
</tr>
</tbody>
</table>
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De Montfort University
Various courses and Journalism
Journalism
Journalism and [Media & Communication / Politics]

University of Derby
Journalism

University of East London
Journalism
Journalism Studies with various courses
Journalism Studies / various courses
Media & Creative Industries - (Journalism Studies)
Various courses with journalism studies
Various courses / journalism studies
Sports Journalism

Edge Hill University
Journalism

Edinburgh Napier University
English and Journalism
Journalism

Exeter College
Journalism and Practical Media

University College Falmouth Incorporating Dartington College of Arts
Journalism

University of Glamorgan, Cardiff and Pontypridd
Broadcast Journalism
Journalism

Glasgow Caledonian University
Journalism

The University of Gloucestershire
Journalism
Photojournalism & Documentary Photography

Glyndwr University
Broadcasting Journalism and Media Communications
Broadcasting, Journalism and Writing
English, Broadcasting and Journalism
Media Studies, Broadcasting and Journalism

University of Greenwich
Journalism and Public Relations

Grimsby Institute of Further and Higher Education
Applied Digital Media Broadcast Journalism - foundation degree

University of Hertfordshire
Various courses with journalism
Various courses and journalism & media cultures
Film and Television Documentary
Joint Honours Open Programme - (Journalism & Media Cultures)
Modular Extended Programme - (Journalism & Media Cultures)

The University of Huddersfield
Journalism
Journalism and Media
Journalism and Media Production - foundation degree
Broadcast Journalism
Various courses and Journalism
Various courses with Journalism
Digital Journalism
Film Journalism and Media
Music Journalism
Music Journalism and Media
Radio Journalism and Media
Sports Journalism
Sports Journalism and Media

Hull College
Digital Media Journalism

The University of Kent
Journalism
Journalism and the news industry

Kingston University
Various courses with Journalism
Journalism
Journalism with various courses

University of Leeds
Broadcast Journalism

Leeds Trinity & All Saints (Accredited College of the University of Leeds)
Journalism
Journalism and PR
Sports Journalism

Leeds Metropolitan University
Journalism
Photographic Journalism

University of Lincoln
Various courses and Journalism
Community Journalism
Journalism
Journalism and Politics
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Journalism and Public Relations

Liverpool John Moores University
English and Journalism
International Journalism
Journalism
Journalism and Digital Cultures
Journalism Professional Studies

The London College, UCK
Media Journalism - diploma

London Metropolitan University
Various courses and journalism
Journalism - foundation
Journalism
Journalism (top-up)
Journalism and various courses

London South Bank University
Print and Online Journalism

Middlesex University
Creative & Media Writing with Journalism
Journalism & Communication with Creative Writing
Journalism and [Communication Studies / Publishing Studies]
Journalism with Media & Cultural Studies

Publishing, Journalism and Media
Television Journalism

Newcastle University
Media, Communication and Cultural Studies

University of Northampton
Journalism
Journalism (top-up)
Journalism with Applied Management / Equine Studies
Journalism/Various courses
Practical Journalism

Northbrook College Sussex
Digital Journalism - diploma, foundation degree

Glyndwr University Wrexham
Broadcasting, Journalism and Creative Writing
Broadcasting, Journalism and Screen Studies

Northumbria University
Journalism
Journalism and English
Media and Journalism

Nottingham Trent University
Broadcast Journalism
Print Journalism

University Centre Peterborough
Journalism

University of Portsmouth
International Journalism and Languages
Journalism
Journalism and various courses

Queen Mary, University of London
Journalism and Contemporary History

The Robert Gordon University
Journalism

Roehampton University
Journalism & News Media and various courses
Various courses and Journalism & News Media

The University of Salford
English Literature / Politics / Sociology with Journalism
Journalism
Journalism
Journalism & Criminology
Journalism and Broadcasting / Design Studies / English Literature / Politics / Sociology / War studies

The University of Sheffield
Journalism and French / Germanic Studies / Hispanic Studies / Russian
Journalism Studies

Sheffield Hallam University
Journalism

Sheffield College
Journalism

Southampton Solent University
Journalism
Magazine Journalism and Feature Writing
Popular Music Journalism
Popular Music Journalism (with foundation)

South East Essex College
Journalism
Television Production with Journalism - foundation

Staffordshire University
Broadcast Journalism
Ethical World Journalism
Journalism
Journalism and various courses
LLB with Journalism
Music Journalism and Broadcasting
Photojournalism
Sports Journalism
Various courses and journalism

The University of Stirling
English Studies and Journalism Studies
Film & Media and Journalism Studies
French and Journalism Studies
Global Cinema & Culture and Journalism Studies
History and Journalism Studies
Journalism Studies
Journalism Studies and various courses

The University of Strathclyde
Various courses and Journalism & Creative Writing
Journalism & Creative Writing and Law
Journalism & Creative Writing and Spanish

University Campus Suffolk
Digital Broadcast Production - foundation

University of Sunderland
Various courses and Journalism
Various courses with journalism
Broadcast Journalism
Journalism
Journalism Studies
Journalism and various courses
Journalism with various courses
Magazine Journalism
News Journalism
Public Relations
Sports Journalism

Swansea Metropolitan University
Photojournalism

University of Teesside
Journalism - foundation
Journalism and News Practice
Multimedia Journalism Professional Practice

Thames Valley University
Broadcast Journalism

University of Ulster
Journalism with various courses

University of the West of Scotland
Journalism
Sports Journalism

University of the Arts London
Fashion Journalism
Journalism
Sports Journalism - foundation

University of Westminster
Journalism
Journalism and Contemporary Arabic Studies / Contemporary Chinese Studies

University of Wolverhampton
Broadcast Journalism - foundation
Broadcasting and Journalism
Geography and Sports Studies
Joint Honours Degrees (Additional Combinations) - (Creative and Professional Writing)

University of Winchester
Various courses and journalism – undergrad degree and diploma of higher education
Journalism – undergrad degree and diploma of higher education
Journalism and various courses

University of Worcester
Various courses and journalism
Journalism and various courses
Annex C – Science content of undergraduate journalism courses

As there are a huge amount of journalism courses offered, the search for scientific content, outside of specialist science journalism course, was refined so that a sample was selected from those universities rated as top for “media communication and librarianship” (includes journalism) in the Guardian university league tables. The results for these courses are displayed below. The number in brackets after the name of each institution relates to the Guardian ranking.

University of Leeds (5)
Broadcast Journalism
Opportunity to focus on science reporting in the third year

Cardiff University (6)
Journalism, Film and Media
Journalism, Media and Cultural Criticism
Journalism, Media and Sociology
No specific modules on science

Bournemouth University (8)
Multimedia Journalism
No specific modules on science

The University of Sheffield (10)
Journalism and French / Germanic Studies / Hispanic Studies / Russian
Journalism Studies
No specific modules on science

University of Westminster (11)
Journalism
(Medical journalism)
Journalism and Contemporary Arabic Studies / Contemporary Chinese Studies
No specific modules on science – but they do offer the medical journalism degree

Nottingham Trent University (12)
Broadcast Journalism
Print Journalism
No science modules

Birmingham City University (13)
Media and Communication (Journalism)
“Can choose to report on specialist subjects, such as sport, music or fashion” but not science.

City University (14)
Journalism
Journalism/Economics/Psychology/Sociology]
(Can do as sandwich courses)
Introductory social science courses but no natural/applied sciences

Edinburgh Napier University (15)
English and Journalism
Journalism
No science modules

The Robert Gordon University (17)
Journalism
No science modules

University of Central Lancashire (19)
Combined Honours Programme - Journalism
Community Journalism
English Language and Journalism
International Journalism
Journalism
No specific science modules

The University of Kent (not ranked)
Journalism
Journalism and the news industry
Optional “Reporting Science” module
## Annex D – Science journalism undergraduate and masters degrees

### Undergraduate

<table>
<thead>
<tr>
<th>University</th>
<th>Course Offered</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Westminster University</td>
<td>Medical Journalism</td>
<td>Specially modified modules from the University's postgraduate journalism courses.</td>
</tr>
</tbody>
</table>

### Masters

<table>
<thead>
<tr>
<th>University</th>
<th>Course Offered</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>City University</td>
<td>Science Journalism</td>
<td>Journalism practice; journalism and society; science and society; editorial production; science reporting; media law; public administration; online journalism; project.</td>
</tr>
<tr>
<td>University College Falmouth</td>
<td>Broadcast Journalism: Investigative Journalism, Science Journalism &amp; Sports Journalism</td>
<td>Broadcast and journalism skills; law and political frameworks; management and media studies; practical programme making; television news packages and news magazines; placement. Specialise in science journalism in sixth unit.</td>
</tr>
<tr>
<td>University of Lincoln</td>
<td>Journalism - Science and Environmental</td>
<td>Core writing; core broadcast (radio and tv); core legal; journalism and society; research methods; specialist reporting; work placement; ethics in science; international human rights; etc, dissertation.</td>
</tr>
</tbody>
</table>
### Annex E – Science communication undergraduate and masters degrees

#### Undergraduate

<table>
<thead>
<tr>
<th>University</th>
<th>Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of East Anglia</td>
<td><em>Biology with Science Communication</em></td>
</tr>
<tr>
<td></td>
<td>Year 1: Introduction to aspects of biology, training in essential scientific methods and techniques</td>
</tr>
<tr>
<td></td>
<td>Year 2: Biology and Society module; work placement in science communication; policy making, medicine and society.</td>
</tr>
<tr>
<td></td>
<td>Year 3: Science communication module with project; independent research project; science documentary production</td>
</tr>
<tr>
<td>The University of Manchester</td>
<td><em>Biology with Science &amp; Society</em></td>
</tr>
<tr>
<td></td>
<td>Social, ethical and political relations of modern science. Issues around genetic engineering up to global environmental issues. Project - topic of historical and contemporary importance in the biosciences.</td>
</tr>
<tr>
<td>University College London</td>
<td><em>Science Communication and Policy</em></td>
</tr>
<tr>
<td></td>
<td><em>(Can also do with language courses – Dutch, French, German, Hebrew, Italian, Russian, Spanish)</em></td>
</tr>
<tr>
<td></td>
<td>History and Philosophy of Science; Science in the Mass Media; Science, Communication and the Citizen; Communication of Scientific Ideas; etc.</td>
</tr>
</tbody>
</table>

#### Masters

<table>
<thead>
<tr>
<th>University</th>
<th>Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiff University</td>
<td><em>Science, Media and Communication</em></td>
</tr>
<tr>
<td></td>
<td>Nature of scientific research and knowledge; analysis of media processes and outputs; practical skills needed to report science; needs and interests of audiences for science communication.</td>
</tr>
<tr>
<td>Imperial College London</td>
<td><em>Science Communication</em></td>
</tr>
<tr>
<td></td>
<td>Science and its social contexts; media representation of science; interviewing and reporting practical; news and feature writing; documentary; science and display; international science policy; multimedia; print; radio; tv.</td>
</tr>
<tr>
<td>University of Glamorgan</td>
<td><em>Communicating Science</em></td>
</tr>
<tr>
<td></td>
<td>History in the Development of Science Communication; Presenting Science; Science in the</td>
</tr>
<tr>
<td>University of Glasgow</td>
<td>Inter-Professional Science Education and Communication</td>
</tr>
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<td>----------------------</td>
<td>--------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Science, education and society; Making science accessible; Understanding educational enquiry; Modern educational thought.</td>
</tr>
<tr>
<td>University of Kent</td>
<td>Science, Communication and Society</td>
</tr>
<tr>
<td></td>
<td>Science at work; history of science communication; science communication in practice; science, ethics and controversy; visualising science; explorations of nuclear America; research project.</td>
</tr>
<tr>
<td>University of the West of England</td>
<td>Science Communication</td>
</tr>
<tr>
<td></td>
<td>Science and society; science, the public and media; broadcasting science; new opportunities in science communication; practical: science direct; writing science; project.</td>
</tr>
<tr>
<td>University of Bath</td>
<td>Science, Risk &amp; Health Communication</td>
</tr>
<tr>
<td></td>
<td>Communication theory; quantitative methods; qualitative methods; research project; workshop; placement.</td>
</tr>
<tr>
<td>The Open University</td>
<td>Science in Society</td>
</tr>
<tr>
<td></td>
<td>Contemporary issues in science communication, science education and public engagement with science. Choice of modules including Science and the Public, Communicating Science in the Information Age and Contemporary Issues in Science Learning plus a compulsory project module.</td>
</tr>
</tbody>
</table>
Annex F – Description of the Chartered Institute of Public Relations course in Technical and Science Writing

Overview
We live in an increasingly technological age and PR professionals, whether in house or working for a consultancy, have to get to grips with that technology and explain it to a wide variety of audiences. This one day course will help you to develop your ability to understand the information you receive from scientists and engineers who create that technology and turn it into interesting and readable copy relevant for the particular target audience.

Topics
Obtaining the raw material – interview or written information
Understanding the technology
Finding “the story” from a wealth of information
Finding the angle
Making it readable and easily understood
Copy clearance with out pain

Learning outcomes
Delegates will leave the course confident they can write technology stories that are readable, interesting and appropriate to the target audience.
Annex G – US fellowship schemes for journalists in science

**Knight Science Journalism Fellowships at MIT** [http://web.mit.edu/knight-science/](http://web.mit.edu/knight-science/)

Offers experienced journalists the opportunity to increase their understanding of science, technology, medicine and the environment. The nine-month fellowships ([http://web.mit.edu/knight-science/fellowships/overview.html](http://web.mit.edu/knight-science/fellowships/overview.html)) provide the time for in-depth study. The nine-month program is divided between individually-chosen activities and twice-weekly Knight **seminars** arranged by the director. A Fellow's work usually includes courses audited at MIT and Harvard, attendance at departmental colloquia, research trips, lab visits, interviews, reading and writing. Each Fellow designs his or her own course of study in discussion with the director. Some Fellows audit three or four courses. Others choose to spend time in a lab.

As an alternative they also offer week-long boot camps and workshops ([http://web.mit.edu/knight-science/bootcamps/current.html](http://web.mit.edu/knight-science/bootcamps/current.html)) where journalists learn from top scientists and policy makers. Boot camp participants get their economy airfare paid for and hotel rooms.

For the 9-month Knight Fellowships fellows receive a stipend of $60,000. Fellows are also given $2000 towards the costs of going on a research trip. Their health insurance is paid for but they must arrange their own housing.

**Nieman Global Health Reporting Fellowships at Harvard** (not sure how relevant this is)  

Includes an academic year spent studying at Harvard, followed by a three-four months of journalistic fieldwork in a developing country.

For one US and one non-US citizen.

The U.S. Fellowships include tuition, a $60,000 stipend and housing and childcare support. Special funding arrangements apply to international fellows.

**Ted Scripps Fellowships in Environmental Journalism**  

A nine-month academic program with seminars and field trips. The program brings participants together with leading environmental specialists. This helps journalists
better understand key environmental issues, but it also helps the scientific community better understand the media and the way journalists work.

Five a year, open to full-time U.S. print or broadcast journalists. Covers tuition and fees. In addition, for the 9-month, 2009-2010 academic year, a $48,000 stipend will be paid.

**NCAR Journalism Fellowship** [http://www.ncar.ucar.edu/resrel/jfellowship/](http://www.ncar.ucar.edu/resrel/jfellowship/)

The NCAR Journalism Fellowship introduces journalists and science communicators to atmospheric and Earth system sciences. Through seminars, laboratory visits, and an introduction to field campaigns, journalists will gain access to exciting new Earth science research findings, and will have a forum for finding answers to topical science questions.

A five-day, residential experience open to professional writers, producers, and editors working for print, broadcast, radio, and online media. NCAR will cover costs including airfare, hotel, transport to-from the Denver Airport and Boulder, as well as a daily meal stipend for the selected NCAR Journalism Fellows. The ideal candidate will have at least five years of writing, producing, or editing experience for a general-interest audience. Freelances, book authors, and writers from non-traditional media may be considered, but should be able to show a substantial portfolio of work.
### European Initiative for Communicators of Science Course

**[http://www.eicos.mpg.de/2.php](http://www.eicos.mpg.de/2.php)**

EICOS offers suitably qualified journalists from any European country and Israel the opportunity to participate in laboratory research by working closely with investigators in their respective fields of interest. Professional journalists from any European country and any media with at least two years experience can apply. Scientific background is not necessary, but reasonable competence in English is mandatory.

*THE HANDS-ON LABORATORY* is an intensive eight-day course which offers the opportunity for journalists (‘Fellows’) to carry out experiments themselves. Following the *Hands-on Laboratory*, Fellows are encouraged to spend an additional week and under certain conditions up to two weeks in the research laboratories of the Max Planck Institute for Biophysical Chemistry in Göttingen or in one of the other participating host institutes in Germany or elsewhere in Europe.

Takes place annually in June (applications in February).

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Research LAbors for TEaching Journalists is an EU-funded project that aims to bridge the gap between science and society. Some 80 journalism students will have the chance to visit top research centres across Europe and then publish their findings. This seems to be a pilot scheme with hopes that it will grow and become self-sustainable.

RELATE core activity is a one-week visit to a top research lab, offered free of charge to 80 European journalism students. RELATE is a pilot initiative that:
- provides new channels for students, journalists and researchers to work together;
- involves two core research institutions (ENEA and EPFL), complemented by the national research agency of Turkey (TÜBITAK) acting as a ‘gateway’ to Turkish laboratories;
- aims to recruit further labs via a communication campaign throughout the project. This experimental approach should ‘test the water’ for similar initiatives in the future.

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### Science Journalism Program at the Marine Biological Laboratory

**[http://www.mbl.edu/sjp/index.html](http://www.mbl.edu/sjp/index.html)**
The Logan Science Journalism Program at the MBL, now in its 23rd year, provides professional science journalists, editors, and broadcast journalists with a chance to forget about story deadlines and the latest breakthroughs, and instead immerse themselves in the process of basic biomedical and environmental research. Journalists work hand in hand with laboratory investigators, and in many cases are given research projects of their own. They return to their jobs with a fuller sense of what it means to be a scientist, and a renewed sense of their mission as science journalists.

The program offers science journalists the choice between two introductory week-long intensive laboratory courses.

**Polar Hands-On Laboratory**, Toolik Field Station, Alaska, June 17 - July 2, 2010

**Biomedical Hands-On Laboratory**, Woods Hole, Massachusetts, May 19 - 27, 2010

Fellowship support covers the cost of tuition, housing, library use, and transportation.

### Metcalf Institute fellowship

[http://www.metcalfinstitute.org/fellowships/sciences.htm](http://www.metcalfinstitute.org/fellowships/sciences.htm)

A week-long science immersion workshop at the University of Rhode Island's Graduate School of Oceanography, a leading marine science research campus in Narragansett, RI. The program teams journalists with scientists and regulatory experts to consider research and policy on coastal environmental issues. For early- to mid-career journalists to sharpen their reporting skills through daily fieldwork and labs.

Metcalf workshop fellowships are offered to working journalists in all media. There is limited space for non-U.S. citizens. A fellowship provides tuition, room, board, and travel support for attendance in the full program week.

### European Union of Science Journalists' Associations


Organises study trips to further "accurate information exchange between European journalists and science communicators and policy makers" and whose main goals are "to improve communication between the international scientific community and society and to promote contacts between journalists in the field of scientific and technical communication".
Annex I – Academic literature review

This is a brief literature review of recently published articles and papers. It should, by no means, be classed as a full and exhaustive list of research in this area. Articles included in this list are based on science journalism as a profession rather than a wider discussion of science communication. Nothing prior to 2007 has been included due to the rapidly changing nature of science journalism.

The search did highlight that there is very little written about science journalism. The dominant themes in academic literature seem to be the public understanding of science, how the media has dealt with particular scientific based stories such as MMR, GM, BSE or hybrid embryos or how scientists should improve communication with the media.

As well as the reference for each article, the list below also includes the abstract.


Barriers that impede effective communication between scientists and journalists include communication styles and skills, professional jargon, mistrust, time constraints, and orientation to knowledge types and “facts.” Here we describe an experiment in building bridges between journalists and scientists in Southeast Asia and Japan in a three-day training workshop. Tangible outcomes include the publication of news articles about the workshop; co-authored science journalism articles pertaining to the Mekong River basin; publication of the workshop proceedings; a poster presented at the IHDP Open Science Meetings; and, continued publication collaboration among the participants.


It's no secret the newspaper industry is hemorrhaging staff writers and slashing coverage as its business model collapses in the face of declining readership and advertising revenues. But less recognized is how this trend is killing off a breed of journalistic specialists that we need now more than ever--science writers, who are uniquely trained for the most difficult stories, those with a complex technical component that are nevertheless critical to politics and society.

We live in a time of pathbreaking advances in biotechnology and nanotechnology, of private spaceflight and personalized medicine, amid a climate and energy crisis, in a world made more dangerous by biological and nuclear terror threats and global pandemics. Meanwhile, advances in neuroscience are calling into question who we are, whether our identities and thought processes can be reduced to purely physical phenomena, whether we actually have free will. The media ought to be bursting
with this stuff. Yet precisely the opposite is happening: even in places where you’d expect it to hold out the longest, science journalism is declining.

http://www.thenation.com/doc/20090817/mooney_kirshenbaum/single


My profession, science journalism, is in a precipitous state of decline. Due to the changing dynamics of how people obtain science news, and the expectation of instant and free information, the quality of science "reporting" has sunk to alarmingly low levels. I'm doubtful that it will recover anytime soon, if ever.

The decline of science journalism (and journalism in general) could easily be the subject of an entire book. But to make my case, I'll cite a few examples.