



Programme Specification

A statement of the knowledge, understanding and skills that underpin a taught programme of study leading to an award from
The University of Sheffield

1	Programme Title	Science Communication
2	Programme Code	APST102 / BIST02
3	JACS Code	C100, F900, P500
4	Level of Study	Postgraduate
5a	Final Qualification	Masters' in Science
5b	QAA FHEQ Level	F7
6a	Intermediate Qualification(s)	PG Dip, PG Cert
6b	QAA FHEQ Level	F7
7	Teaching Institution (if not Sheffield)	Not applicable
8	Faculties	Science (Lead), Social Sciences
9	Department	School of Biosciences (Lead)
10	Other Departments involved in teaching the programme	School of Journalism, Media and Communication (Social Sciences)
11	Mode(s) of Attendance	Full-time
12	Duration of the Programme	1 year
13	Accrediting Professional or Statutory Body	Not applicable
14	Date of production/revision	March 2018, August 2022

15. Background to the programme and subject area

The communication of science is playing an increasingly important role in public life. People can only make informed decisions about issues if they have access to pertinent and comprehensive information that can be accessed in a variety of ways. This programme is aimed at graduate scientists and those in related disciplines who wish to develop their skills to communicate complex scientific ideas to a general audience. Students will have the opportunity to use a variety of different media, such as video, podcasting, web technologies (including social media) to communicate science coherently and compellingly to a range of audiences.

16. Programme aims

The programme aims to provide a both a practical and theoretical understanding and awareness of the approaches that can be used to disseminate scientific information. It will examine the importance of disseminating scientific findings accurately to both specialist and mainstream audiences and how this information can be targeted effectively using a variety of media. The programme content will provide students with an opportunity to increase their all-round knowledge of important topics in contemporary science and will raise awareness about the wider ethical and political debates that relate to these. The practical elements of the programme aim to provide students with transferable skills that will appeal to a wide range of employers thereby increasing a student's employability prospects on graduation.

17. Programme learning outcomes

Knowledge and understanding:

At the end of the programme, students will be able to demonstrate:

K1	a critical understanding of the role of the media in science communication.
K2	a critical understanding of how information is gathered and communicated through the media.
K3	a critical understanding of the strengths and weaknesses of differing communication strategies.

K4	an appreciation of the ethical and political considerations when reporting contemporary science.
K5	a good understanding of modern scientific advancements in the general areas of chemistry, physics and biology.
K6	an awareness of the different methods that can be employed when undertaking research.

Skills and other attributes:	
At the end of the programme, students will be able to demonstrate:	
S1	the ability to summarise and report on key issues in science communication.
S2	the ability to work under pressure and to strict deadlines.
S3	the ability to use a variety of tools to communicate science including written work, web-based materials and broadcasting techniques.
S4	independent research skills.
S5	the ability to work as a member of a team.
S6	the skills to plan and organise a number of activities including an effective communication campaign strategy and a public festival or related event.
S7	the ability to use problem solving techniques as and when necessary.

18. Teaching, learning and assessment

Development of the learning outcomes (K1-K7 and S1-S7) is promoted through the following teaching and learning methods:

Lectures

Lectures will be combined with either seminars or workshops to foster theoretical debate or provide practical skills. They will help to introduce students to the key issues regarding communicating science, by exposing them to the ideas, issues and public debate that surround this subject within the context of a research-led scientific environment.

Guest Speaker lectures (external presentations)

These will be taken from the broad scientific seminar series delivered by the Faculty of Science and chosen by the Programme Team at the beginning of the year, updated as new lectures are confirmed. An intensive 3 background session will be delivered by staff from the appropriate department to provide core scientific background material to the lecture. Guest speaker lectures will also be provided by the Department of Journalism and Faculty of Medicine, Dentistry & Health.

Seminars (often led by staff but with extensive student interaction)

Seminars will allow students to critically engage with and reflect upon a wide range of literature on science communication. The seminars also provide an opportunity for students to discuss key debates and issues that have been raised by the literature and present their own analyses of such perspectives and debates.

Workshops and Masterclasses (led by external experts in the broad area of scientific communication and the media)

Students will attend workshops and master classes in five key methods for communicating science. These include written prose, web-page design, podcasting, television & radio, and outreach to schools. The workshops will also be used to examine the differing professional routines that scientists and journalists employ by identifying good and bad practice of these routines.

Project work

Another important aspect of the programme is the planning, organisation and delivery of a science festival or related public event. Students will develop and use their communication skills to liaise and engage with the public and prepare the materials and resources required to stage the event. Key to this will be effective group and project work.

Opportunities to demonstrate achievement of the learning outcomes (K1-K7 and S1-S7) are provided through the following assessment methods:

Practical exercises

Students will undertake a variety of practical exercises in which they will learn the importance of effective communication. These will include holding a press conference, writing news releases, dealing with interviews and campaign management.

Individual critical essays

With reference to existing literature, students will be asked to analyse a specified news item and identify the key issues within it. Students will then assess how reliable and valid the information is (accuracy) and determine if the language and style make the information more or less accessible for the general public. Students will look at issues such as the nature of the sources used by those producing the stories and the characteristics and usefulness of the content provided.

Research methods and techniques

Research methods and techniques, including regulatory and ethical issues are covered through theoretical study, case studies and detailed reading lists.

Organisation of a public event

Assessment of the science festival or related public event will consist of four sets of marks, derived from the end-user feedback, peer assessment, a self-reflective précis of the project as a whole and their contribution to it and an assessment by a member of staff.

Dissertation – independent study

This will involve a substantial piece of work that may be i. practice-based, ii. critical analysis or iii. experimental research. It draws together other elements of the programme and providing the opportunity for the student to complete an in-depth study of a specific area of interest. From the three options proposed students may take one or combinations may be possible. In all cases, students will experience individual interaction in an area of science communication leading to a major output (thesis, artefact and critical appraisal (such as a piece of media and account of its impact), or a piece of experimental work with comment on the communication of its outcome to a wider audience.

19. Reference points

The learning outcomes have been developed to reflect the following points of reference:

This is an innovative collaboration between faculties and academic cultures. There are no benchmarks or similar documents to reference this programme to, although the Department of Business and Innovation Skills report on “Science and the Media: Securing the Future” (2010, <http://webarchive.nationalarchives.gov.uk/tna/+http://www.bis.gov.uk/wp-content/uploads/2010/01/Science-and-the-Media-Securing-Future.pdf/>) has played an important role in the development of the programme. The University of Sheffield Learning Teaching and Assessment Strategy (Education in a Civic University) has also significantly influenced our approach (<http://www.shef.ac.uk/lets/strategy>).

20. Programme structure and regulations

The programme complies with the common structure for PGT programmes: it incorporates 6 x 15, 1 x 30 and 1 x 60 credit units.

Detailed information about the structure of programmes, regulations concerning assessment and progression and descriptions of individual modules are published in the University Calendar available on-line at <http://www.sheffield.ac.uk/calendar/regs>.

21. Student development over the course of study

Students will have to complete a range of activities increasing in complexity throughout the programme. These will have tangible outcomes so that students can track their personal development and achievements throughout the year. Extensive feedback will be given and throughout the programme emphasis is given to ‘real world’ and professional competences.

22. Criteria for admission to the programme

Detailed information regarding admission to programmes is available from the University's On-Line Prospectus at <http://www.shef.ac.uk/courses/>.

Minimum 2:1 in a Science or related discipline.

IELTS minimum 7.0 overall with at least 6.5 in each component.

23. Additional information

This specification represents a concise statement about the main features of the programme and should be considered alongside other sources of information provided by the teaching department(s) and the University. In addition to programme specific information, further information about studying at The University of Sheffield can be accessed via our Student Services web site at <http://www.shef.ac.uk/ssid>.

Several of the staff involved in the development and delivery of this programme are experienced presenters and/or consultants to the media, including television, film, radio, podcasts, print and other written web-based formats.

There is a purpose built, well-equipped, Science Communication Laboratory that forms the base for students on this programme

The University of Sheffield is a major research-led institution that values the effective communication of science, indeed Professor Ryan (contributor to this programme, is a past Royal Institution Christmas lecturer).