



**CORPORATE AND ACADEMIC SERVICES**

**MODULE SPECIFICATION**

Part 1: Basic Data					
Module Title	Science Communication				
Module Code	USSKCE-15-3	Level	3	Version	1
Owning Faculty	Health & Applied Sciences	Field	Biological, Biomedical and Analytical Sciences		
Contributes towards	BSc Biological Sciences; BSc Biomedical Sciences (Clinical); BSc Biomedical Sciences; BSc Environmental Sciences; BSc Forensic Science.				
UWE Credit Rating	15	ECTS Credit Rating	7.5	Module Type	Standard
Pre-requisites	none		Co- requisites	none	
Excluded Combinations	none		Module Entry requirements		
Valid From	September 2016		Valid to	September 2022	

<b>CAP Approval Date</b>	28/03/2014
--------------------------	------------

Part 2: Learning and Teaching	
Learning Outcomes	<p>On successful completion of this module students will be able to:</p> <ul style="list-style-type: none"> <li>analyse the opportunities and constraints of different approaches to science communication, both media based (e.g. print, broadcast) and direct audience interventions (e.g. public consultation, demonstrations) as vehicles for science communication (Component A&amp;B);</li> <li>appreciate the challenges faced by both scientists and science communicators in relation to scientific issues (Component B);</li> <li>analyse the role of scientific uncertainty and scientific controversy in the development of a public controversy (Component B);</li> <li>analyse the role of the media in creating scientific controversy (Component A&amp;B);</li> <li>design and evaluate strategies for communicating science to the public (Component A);</li> </ul>
Syllabus Outline	<p>The aim of this module is to develop students' understanding of the interface between science and society. The module will use a case study approach in order to achieve in-depth analysis of how the public has been involved with controversial scientific issues, both contemporary and in the (recent) past.</p> <p>Students will examine areas where science has become controversial (e.g. fracking, forensics, robotics, stem cell research) with a view to exploring the roles of scientists,</p>

	<p>the media, political/governmental publics and various 'lay' publics in the generation and propagation scientific controversy. Topics may change from time to time to ensure that the ones featured best illustrate how controversy arises at the science and society interface and to ensure that contemporary issues are covered. Focusing on contemporary issues will allow students to track the issue in the media and will provide students with an opportunity to explore the role the media plays in developing scientific issues.</p> <p>For each controversy covered, the curriculum might include:</p> <ul style="list-style-type: none"> <li>• The scientific concepts behind the issue</li> <li>• Scientific basis for the controversy</li> <li>• Development of the controversy - including political aspects as appropriate</li> <li>• Issues of risk and risk perception</li> <li>• Public opinion</li> <li>• Locus of the debate</li> <li>• Media coverage</li> </ul> <p>Students will thus be able to use clear examples to explore the impact of the media on society and in particular as a source of informal learning about science and its role in science communication. Students will also explore other public spaces, in particular theatre and public debates, as sites for communication about controversial science issues and will evaluate the role of public consultation in developing debates about controversial scientific issues.</p> <p>The module aims to provide future scientists with practical skills relating to communicating science built through the case studies (e.g. written skills, for example press releases and posters, and oral skills, such as presentation and debate).</p>
Contact Hours	<p>12 X 3 hour sessions (based on 2 hour lecture and 1 hour workshop)</p> <p>Totalling 36 hours, as per requirements for a 15 credit module</p>
Teaching and Learning Methods	<p>This module will be delivered primarily using mini-lectures and practical workshops.</p> <p><b>Scheduled Learning</b>  Considerable emphasis will be placed on developing understanding of the contexts in which science is communicated. A mini-lecture will be provided for each case study providing the background information necessary for students to understand the implications for communication of that scientific issue.</p> <p>Workshop sessions will be designed to simulate practical communication situations, such as when a scientist is interviewed by the media. Formative assessment opportunities, including opportunities to present ideas in workshops, will help encourage students to develop the ability to critique their own and peers' approaches to science communication.</p> <p><b>Independent Learning</b>  In class teaching and learning will be supplemented by independent learning. This will include exploration of a variety of science communication methodologies. Students will be expected to read key texts and conduct research for discussion in workshops. Students will be provided with milestones for formative feedback over the module,</p>

which will encourage continuous working on their assessment.

It is expected that completion of formative feedback opportunities, engagement with printed and online resources and pre-research for activities in workshops will take students to the notional 150 hours of study associated with this module.

Key Information Sets Information

Key Information Sets (KIS) are produced at programme level for all programmes that this module contributes to, which is a requirement set by HESA/HEFCE. KIS are comparable sets of standardised information about undergraduate courses allowing prospective students to compare and contrast between programmes they are

Key Information Set - Module data				
Number of credits for this module				15
Hours to be allocated	Scheduled learning and teaching study hours	Independent study hours	Placement study hours	Allocated Hours
150	36	114		150

The table below indicates as a percentage the total assessment of the module which constitutes a -

**Written Exam:** Unseen written exam, open book written exam, In-class test  
**Coursework:** Written assignment or essay, report, dissertation, portfolio, project  
**Practical Exam:** Oral Assessment and/or presentation, practical skills assessment, practical exam

Total assessment of the module:	
Written exam assessment percentage	0%
Coursework assessment percentage	100%
Practical exam assessment percentage	0%
	100%

Reading Strategy

All students will be encouraged to make full use of the print and electronic resources available to them through membership of the University. These include a range of electronic journals and a wide variety of resources available through web sites and information gateways. The University Library's web pages provide access to subject relevant resources and services, and to the library catalogue. Many resources can be accessed remotely. Students will be presented with opportunities within the curriculum to develop their information retrieval and evaluation skills in order to identify such resources effectively.

Any **essential reading** will be indicated clearly, along with the method for accessing it, e.g. students may be expected to purchase a set text, be given or sold a print study pack or be referred to texts that are available electronically, etc. This guidance will be available either in the module handbook, via the module information on Blackboard or through any other vehicle deemed appropriate by the module/programme leaders.

If **further reading** is expected, this will be indicated clearly. If specific texts are listed, a clear indication will be given regarding how to access them and, if appropriate, students will be given guidance on how to identify relevant sources for themselves,

	<p>e.g. through use of bibliographical databases.</p> <p>A detailed reading list will be made available through relevant channels, e.g. module handbooks, Blackboard, etc.</p> <p>As part of the research, students will be expected to read and reference widely. Student learning will be supported through 'Blackboard' - the University's E learning space. Copies of recommended text books, scientific papers and relevant magazines are available through the library. However for this module students are also encouraged to seek materials from the media. Library resources such as 'BoB' and Nexis will also be highlighted for students.</p>
Indicative Reading List	<p>The latest edition of:</p> <p>Bauer, M. W. and Bucchi, M. <i>Journalism, Science and Society: Science Communication Between News and Public Relations</i>. London: Routledge.</p> <p>Brake, M. and Weitkamp, E. <i>Introducing Science Communication</i>. London: Routledge.</p> <p>Bucchi, M. <i>Science in Society: An Introduction to Social Studies of Science</i>. London: Routledge.</p> <p>Erickson, M. <i>Science, Culture and Society</i>. Cambridge: Polity Press.</p> <p>Friedman, S., Dunwoody, D. and Rogers, C. <i>Communicating Uncertainty: Media Coverage of New and Uncertain Science</i>. Mahwah: Erlbaum.</p> <p>Gregory, J. and Miller, S. <i>Science in Public: Communication, Culture and Credibility</i>. Cambridge: Perseus Publishing.</p> <p>Humphrey, T. and Gutwill, J.P. <i>Fostering Active Prolonged Engagement: The Art of Creating APE Exhibits</i>. Exploratorium Museum Professional Series. Walnut Creek, CA: Left Coast Press.</p> <p>Nelkin <i>Selling Science: How the press cover science and technology</i>, New York: Freeman.</p> <p>Wilsdon, J. and Willis, R. <i>See Through Science: Why Public Engagement needs to move upstream</i>. London: Demos.</p> <p>Yearley, S. (2005) <i>Making Sense of Science; Understanding the Social Study of Science</i>. London: Sage.</p> <p><b>Journals</b></p> <p>Cultural Studies of Science Education</p> <p>Journalism Studies</p> <p>New Media and Society</p> <p>New Scientist</p> <p>Journal of Science Communication.</p> <p>Public Understanding of Science</p> <p>Science Communication</p>

	<p><b>Web resources</b></p> <p>Box of Broadcasts - BoB is an off-air recording and media archive service. BoB is available to staff and students of member institutions of the British Universities Film &amp; Video Council that hold an ERA+ license.</p> <p>Nexis – Nexis is full text database including UK national and regional newspapers and trade press plus many newspapers and magazines published worldwide.</p> <p>A further reading list is also provided for each case study.</p>
--	--

Part 3: Assessment	
Assessment Strategy	<p><b>Assessment</b></p> <p>Students are required to submit a portfolio for assessment comprising two workshop outcomes and an essay. This will include the outcomes of set tasks throughout the module.</p> <p><b>Component A: Workshop Outcomes 60%</b></p> <p>The workshop outcome will build upon two of the five workshop activities undertaken in the module. Workshop outcomes include activities such as writing a news article, planning a new media intervention or designing a data collection approach.</p> <p>Due to the differences between the activity types investigated during the workshops, the formats required may vary. An indication is given within the module handbook of the format for each of the workshop outcomes and how it will meet the marking criteria.</p> <p><b>Component B: Essay 40%</b></p> <p>Students will complete an essay which demonstrates their analysis skills, understanding of science communication theory and specific understanding on one of the case studies considered in the module. Students will be provided with a series of questions from which they will answer one.</p> <p>Students are informed at the start of the module that the essay and the workshop outcomes must consider different controversial science case studies.</p>

Identify final assessment component and element		
% weighting between components A and B (Standard modules only)	<b>A: 60%</b>	<b>B: 40%</b>
<b>First Sit</b>		
<b>Component A (controlled conditions)</b> <b>Description of each element</b>	<b>Element weighting</b> <b>(as % of component)</b>	
1. Workshop Outcomes	100%	
<b>Component B</b> <b>Description of each element</b>	<b>Element weighting</b> <b>(as % of component)</b>	
1. Essay	100%	

--	--

<b>Resit (further attendance at taught classes is not required)</b>	
<b>Component A</b> (controlled conditions) <b>Description of each element</b>	<b>Element weighting</b> <b>(as % of component)</b>
1. Workshop Outcomes	100%
<b>Component B</b> <b>Description of each element</b>	<b>Element weighting</b> <b>(as % of component)</b>
1. Essay	100%
<p>If a student is permitted an <b>EXCEPTIONAL RETAKE</b> of the module the assessment will be that indicated by the Module Description at the time that retake commences.</p>	