



MODULE SPECIFICATION

Part 1: Information			
Module Title	Science Communication		
Module Code	USSKCE-15-3	Level	Level 6
For implementation from	2020-21		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Health & Applied Sciences	Field	Applied Sciences
Department	HAS Dept of Applied Sciences		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Educational Aims: 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>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 in the form of news stories, and skills in organizing a science communication event such as an exhibition).</p> <p>Outline Syllabus: 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 and stem cell research) with a view to exploring the roles of scientists, the media, political/governmental publics and various 'lay' publics in the generation and propagation of 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</p>

STUDENT AND ACADEMIC SERVICES

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. [SB1]

For each controversy covered, the curriculum might include:

- The scientific concepts behind the issue
- Scientific basis for the controversy
- Development of the controversy - including political aspects as appropriate
- Issues of risk and risk perception
- Public opinion
- Locus of the debate
- Media coverage

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, such as 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.

Teaching and Learning Methods: 11 X 3 hour sessions (based on 2 hour lecture and 1 hour workshop) totalling 33 hours, as per requirements for a 15 credit module.

This module will be delivered primarily using online mini-lectures and practical workshops.

Scheduled Learning

Considerable emphasis will be placed on developing an 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. Workshop sessions will be designed to simulate practical communication situations, such as debating ethical questions raised by scientific research. 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.

Independent Learning

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, which will encourage continuous working on their assessment. It is expected that students will undertake the completion of formative feedback opportunities as well as engagement with printed and online resources and pre-research for activities in workshops.

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.

Part 3: Assessment

Assessment

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.

Component A: Workshop Outcomes 60%

The workshop outcomes will build upon two of the five workshop activities undertaken in the module. Workshop outcomes include activities such as writing a science article for a lay audience, planning a digital media intervention or designing a science exhibition.

Due to the differences between the activity types investigated during the workshops, the formats of the written

STUDENT AND ACADEMIC SERVICES

work 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. The different workshop outcomes require some common skills, such as techniques for explaining science clearly to non-experts and adapting outputs to different audiences. But in their two workshop outcomes, these skills need to be applied by students to different science subjects and different forms of communication.

Component B: Essay 40%

Students will complete an essay which demonstrates their critical analysis skills, understanding of science communication theory and specific understanding of one of the case studies considered in the module. Students will be provided with five questions, each of which relate to one case study. They must choose one essay question to answer from this choice of five.

Students are free to choose which two workshop outcomes and which essay they write. However, they are instructed that each of the three pieces of work must relate to a different case study. This is to encourage students to apply their practical and analytical skills to different fields of science, broadening their learning.

Students will be asked to submit one of the workshop outcomes before the other. This is to enable the feedback provided for the first workshop outcome submitted to be formative towards their completion of the second workshop outcome. Due to the earlier deadline for the first workshop outcome, students will be instructed that this must relate to one of the first three case studies considered in the module. Other than that, students are free to choose which workshop outcomes and which essay they write within the limitation that all three must relate to a different case study.

First Sit Components	Final Assessment	Element weighting	Description
Written Assignment - Component A	✓	42 %	Workshop Outcome 2 (750 words)
Written Assignment - Component A		18 %	Workshop Outcome 1 (750 words)
Written Assignment - Component B		40 %	Essay (1000 words)
Resit Components	Final Assessment	Element weighting	Description
Written Assignment - Component A	✓	42 %	Workshop Outcome 2 (750 words)
Written Assignment - Component A		18 %	Workshop Outcome 1 (750 words)
Written Assignment - Component B		40 %	Essay (1000 words)

STUDENT AND ACADEMIC SERVICES

Part 4: Teaching and Learning Methods																	
Learning Outcomes	<p>On successful completion of this module students will achieve the following learning outcomes:</p> <table border="1"> <thead> <tr> <th style="text-align: left;">Module Learning Outcomes</th> <th style="text-align: left;">Reference</th> </tr> </thead> <tbody> <tr> <td>Critically 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 and B)</td> <td>MO1</td> </tr> <tr> <td>Appreciate the challenges faced by both scientists and science communicators in relation to scientific issues (component B).</td> <td>MO2</td> </tr> <tr> <td>Analyse the role of scientific uncertainty and scientific controversy in the development of a public controversy as well as the role of the media (component A and B).</td> <td>MO3</td> </tr> <tr> <td>Design and evaluate strategies for communicating science to the public (Component A).</td> <td>MO4</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Critically 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 and B)	MO1	Appreciate the challenges faced by both scientists and science communicators in relation to scientific issues (component B).	MO2	Analyse the role of scientific uncertainty and scientific controversy in the development of a public controversy as well as the role of the media (component A and B).	MO3	Design and evaluate strategies for communicating science to the public (Component A).	MO4						
Module Learning Outcomes	Reference																
Critically 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 and B)	MO1																
Appreciate the challenges faced by both scientists and science communicators in relation to scientific issues (component B).	MO2																
Analyse the role of scientific uncertainty and scientific controversy in the development of a public controversy as well as the role of the media (component A and B).	MO3																
Design and evaluate strategies for communicating science to the public (Component A).	MO4																
Contact Hours	<table border="1"> <thead> <tr> <th colspan="2">Independent Study Hours:</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Independent study/self-guided study</td> <td style="text-align: center;">117</td> </tr> <tr> <td style="text-align: center;">Total Independent Study Hours:</td> <td style="text-align: center;">117</td> </tr> <tr> <th colspan="2">Scheduled Learning and Teaching Hours:</th> </tr> <tr> <td style="text-align: center;">Face-to-face learning</td> <td style="text-align: center;">33</td> </tr> <tr> <td style="text-align: center;">Total Scheduled Learning and Teaching Hours:</td> <td style="text-align: center;">33</td> </tr> <tr> <td>Hours to be allocated</td> <td style="text-align: center;">150</td> </tr> <tr> <td>Allocated Hours</td> <td style="text-align: center;">150</td> </tr> </tbody> </table>	Independent Study Hours:		Independent study/self-guided study	117	Total Independent Study Hours:	117	Scheduled Learning and Teaching Hours:		Face-to-face learning	33	Total Scheduled Learning and Teaching Hours:	33	Hours to be allocated	150	Allocated Hours	150
Independent Study Hours:																	
Independent study/self-guided study	117																
Total Independent Study Hours:	117																
Scheduled Learning and Teaching Hours:																	
Face-to-face learning	33																
Total Scheduled Learning and Teaching Hours:	33																
Hours to be allocated	150																
Allocated Hours	150																
Reading List	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p>https://uwe.rl.talis.com/modules/usskce-15-3.html</p>																

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Integrated Wildlife Conservation {Top-Up} [Sep][FT][Frenchay][1yr] BSc (Hons) 2020-21

Environmental Science [Sep][FT][Frenchay][4yrs] MSci 2018-19

Forensic Science [Sep][FT][Frenchay][4yrs] MSci 2018-19

Biomedical Science [Sep][FT][Frenchay][4yrs] MSci 2018-19

Biomedical Science [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Environmental Science [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Biological Sciences [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19

Biological Sciences [Sep][FT][Frenchay][4yrs] MSci 2018-19

Forensic Science [Sep][FT][Frenchay][3yrs] BSc (Hons) 2018-19