

## MODULE SPECIFICATION FORM

|                      |                     |               |   |                      |    |
|----------------------|---------------------|---------------|---|----------------------|----|
| <b>Module Title:</b> | Science and Society | <b>Level:</b> | 6 | <b>Credit Value:</b> | 20 |
|----------------------|---------------------|---------------|---|----------------------|----|

|                     |        |   |                                       |    |
|---------------------|--------|---|---------------------------------------|----|
| <b>Module code:</b> | SCI623 | New <input checked="" type="checkbox"/><br>Existing | <b>Code of module being replaced:</b> | NA |
|---------------------|--------|---|---------------------------------------|----|

|                     |      |                    |      |
|---------------------|------|--------------------|------|
| <b>Cost Centre:</b> | GAFS | <b>JACS3 code:</b> | F100 |
|---------------------|------|--------------------|------|

|   |   |                          |              |
|---|---|--------------------------|--------------|
| <b>Trimester(s) in which to be offered:</b> | 1 | <b>With effect from:</b> | September 16 |
|---|---|--------------------------|--------------|

|                |  |                       |               |
|----------------|--|-----------------------|---------------|
| <b>School:</b> | Applied Science, Computing & Engineering | <b>Module Leader:</b> | Clive Buckley |
|----------------|--|-----------------------|---------------|

|                                       |                |
|---------------------------------------|----------------|
| Scheduled learning and teaching hours | 50 hrs         |
| Guided independent study              | 150 hrs        |
| Placement                             | 0 hrs          |
| <b>Module duration (total hours)</b>  | <b>200 hrs</b> |

|  |                          |                                     |
|--|--------------------------|-------------------------------------|
| <b>Programme(s) in which to be offered</b> | Core                     | Option                              |
| BSc (Hons) Chemistry with Education        | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Office use only

Initial approval July 2016

APSC approval of modification July 2016

Have any derogations received SQC approval?

Version 1

Yes  No

## Module Aims

To broaden the scientific and technical knowledge of students through the exploration of topical issues.

Enable students to gain an understanding of how science and technology influence and are influenced by contemporary society.

To develop communication and presentational (written and verbal) skills.

## Intended Learning Outcomes

To enable students to:

- 1 Collect and appraise written scientific/technological information.
- 2 Construct scientific/technological argument.
- 3 Formulate an overview of a scientific/technological topic.
- 4 Judge the impact of science and technology on society and vice versa.

Key skills for employability

- KS1 Written, oral and media communication skills
- KS2 Leadership, team working and networking skills
- KS3 Opportunity, creativity and problem solving skills
- KS4 Information technology skills and digital literacy
- KS5 Information management skills
- KS6 Research skills
- KS7 Intercultural and sustainability skills
- KS8 Career management skills
- KS9 Learning to learn (managing personal and professional development, self-management)
- KS10 Numeracy

| At the end of this module, students will be able to |  | Key Skills |                         |
|---|--|------------|-------------------------|
| 1   | Collect and appraise written scientific/technological information. | KS1        | KS2                     |
|   |  | KS4        | KS6                     |
|   |  | KS9        | Corresponding Key Skill |
| 2   | Construct scientific/technological argument.                       | KS1        | KS3                     |
|   |  | KS4        | KS5                     |
|   |  | KS6        | KS9                     |
| 3   | Formulate an overview of a scientific/technological topic.         | KS1        | KS4                     |
|   |  | KS5        | KS6                     |

|  |   |                         |                         |
|--|---|-------------------------|-------------------------|
|  |   | Corresponding Key Skill | Corresponding Key Skill |
| 4  | Judge the impact of science and technology on society and vice versa. | KS1                     | KS3                     |
|  |   | KS4                     | KS5                     |
|  |   | KS6                     | KS9                     |
| Transferable/key skills and other attributes   |   |                         |                         |
| <ul style="list-style-type: none"> <li>• Literacy</li> <li>• Numeracy (if appropriate to the topic)</li> <li>• Time management</li> <li>• Information technology and management skills</li> <li>• Communication and presentation skills</li> <li>• Team working</li> </ul> |   |                         |                         |

|                    |
|--------------------|
| <b>Derogations</b> |
| None               |

| <b>Assessment:</b> Please give details of indicative assessment tasks below.  |                             |                     |               |                    |   |
|---|-----------------------------|---------------------|---------------|--------------------|---|
| <ol style="list-style-type: none"> <li>1. Poster presentation: A poster that examines a Science Technology and Society (STS) topic (e.g. 'Designer babies')</li> <li>2. A report: A detailed report on an STS topic with particular emphasis on the educational, political and social issues</li> </ol> |                             |                     |               |                    |   |
| Assessment number   | Learning Outcomes to be met | Type of assessment  | Weighting (%) | Duration (if exam) | Word count (or equivalent if appropriate) |
| 1   | 1, 2                        | Poster Presentation | 50%           |                    | 2,000                                     |
| 2   | 3, 4                        | Report              | 50 %          |                    | 2,000                                     |

|   |
|---|
| <b>Learning and Teaching Strategies:</b>  |
| <p><u>Lectures/Tutorials</u><br/>Each topic covered will be introduced and discussed in lectures/tutorials. Students will be guided through their self-study (below) in tutorials.</p> <p><u>Directed self-study</u><br/>Students will in groups or individually, as appropriate, research topics, and prepare and deliver the requisite report/presentation.</p> |

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| <b>Syllabus outline:</b>   |
| <p>Topics covered will depend on the topical issues of the day. Indicative examples include:</p> <ul style="list-style-type: none"> <li>• Risk (Case study: the ALAR controversy)</li> <li>• Climate Change</li> </ul> |

- Genetic manipulation
- Food and water safety (BSE/nCJD)
- Nuclear Power
- Science, media and culture

## **Bibliography:**

### **Essential reading**

As necessary, depending on the topic. Primary journals and review article (*inter alia* Nature and Scientific America), and contemporary reports are expected to form the bulk of the required reading.

Web sites as appropriate, for example

Climate Change –NASA <http://climate.nasa.gov/>

Science, Technology and Society Research Priority Group

<http://www.nottingham.ac.uk/sciencetechnologyandsociety/about/research-themes/energyandclimatechange/index.aspx> (Nottingham University)

Science and Technology (USA Environmental Protection Agency)

<http://www.epa.gov/science-and-technology>

National Oceanic and Atmospheric Administration (NOAA) <http://www.noaa.gov/climate.html>

### **Other indicative reading**

McGinn, R., E. (1991) *Science, Technology and Society* Pearson (dated but classic text)

Easton, T. (2011) *Taking Sides: Clashing Views in Science, Technology, and Society* McGraw-Hill/Dushkin