This course will introduce you to the impact of fictional representations of science and scientists on public perceptions of science. It introduces research, theory and methods from this growing area of science communication as applied to fictional works including films, television, plays, novels, short stories and comics. We will ask questions like:

- When does it matter that there is incorrect physics in *The Core*?
- What does *Doctor Who* offer to understanding public ideologies of science?
- How can we use *Jurassic Park* to teach biology?
- Why is theatre an effective HIV/AIDS education tool in Tanzania and not in Australia?
- How did *The Day After Tomorrow* impact public action on climate change?
- What do people think about the science they find in *The Simpsons*?

**SCOM6003 Science in Popular Fiction** is heavily oriented towards science communication research skills, but with an emphasis on applying those to practical outcomes and professional science communication activities. All students research and design an evidence-based science communication product or event in the course that uses fiction to communicate or teach science.
Beyond applications of fiction to science communication, the course also has more generic practical benefits for science communication careers. The specific data collection method you learn and use in the course - focus groups - is one of the essential tools science communicators use in government, industry and community sectors to gauge public attitudes towards science and technology. We will also look at the uses of fiction for teaching science in formal and informal learning environments, for promoting new technologies, and for encouraging people to change their health behaviours.

**COURSE OVERVIEW**

| Mode of Delivery | On campus  
| Classes are in the Green Couch Room (building 38A)  
| Mondays 2-4, Tuesdays 12-2 (attend both classes) |
| Prerequisites | None for MSciCom students, others by permission |
| Incompatible Courses | None |
| Course Convener | Dr Lindy Orthia  
Senior Lecturer at the Australian National Centre for the Public Awareness of Science (CPAS) |
| Phone: | 6125 6148 |
| Email: | lindy.orthia@anu.edu |
| Office hours: | By appointment |
| Research Interests | • Fiction as a science communication medium  
• Ideological frames for science in public discourse  
• History of the idea of science and its links to science communication |

**Learning Outcomes**

When you complete the course you will have an improved ability to:

1. describe, question and critique the historical developments in the ways that fiction has been discussed by science communication scholars.
2. distinguish between different fictional representations of science and scientists in terms of their significance for the science-society relationship.
3. apply theory and research about science in popular fiction to science communication practice.
4. think reflexively about the study and application of science in popular fiction and your place within it.
5. work as a team to deliver research reports and other materials for public consumption in a timely manner.
6. manage a public science communication project that involves both collaboration and independent learning.
7. critique and correct others’ public science communication efforts in a professional and encouraging manner.
8. conduct science communication research using social science research methods such as content analysis, focus groups and questionnaires.
## Assessment Summary

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Value</th>
<th>Due Date</th>
<th>Assessment Returned</th>
<th>Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reflective folio critically reflecting on readings and assessment (20%)</td>
<td>20%</td>
<td>Wed 30 September</td>
<td></td>
<td>1,2,3,4</td>
</tr>
<tr>
<td>Management, curation of and contributions to wiki (20%)</td>
<td>20%</td>
<td>Wed 21 October</td>
<td>All within 2 weeks of submission</td>
<td>1,2,3,5,6,7</td>
</tr>
<tr>
<td>Fiction in science communication product or event research project (60%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part 1: Literature review, content analysis, project design and methods proposal</td>
<td>40%</td>
<td>Wed 23 September</td>
<td></td>
<td>1,2,3,4,8</td>
</tr>
<tr>
<td>Part 2: Evaluation results report</td>
<td>20%</td>
<td>Friday 6 November</td>
<td></td>
<td>1,3,4,7,8</td>
</tr>
</tbody>
</table>

### Research-Led Teaching

This course is highly research-led in several important ways:

- the course readings, which you will discuss in your reflective folio, are almost all influential and/or recent academic research papers from the field of science communication;
- your wiki contributions and curation of others’ contributions to the wiki will be based on published research, and will contribute to future researchers’ work in this field;
- the major assessment item in the course is your research project, which involves learning and implementing research skills at every step, with an outcome of creating an evidence-based proposal for a science communication product or event whose efficacy is evaluated using original data you collect and analyse.

### Feedback

#### Staff feedback to students

Students will be given feedback in the following forms in this course:

- formative feedback on your ideas as they develop in one-to-one meetings with the course convenor about your research project.
- detailed, personalised written comments on every assignment, including corrections on the text itself, summary feedback on overall strengths and weaknesses, and for Turnitin assignments, indicative rubric ranks.
opportunities to discuss that feedback with the marker, tutor and course convenor.

summary feedback to the whole SCOM6003 cohort where appropriate and relevant.

**Student feedback on teaching and learning**

ANU is committed to the demonstration of educational excellence and regularly seeks feedback from students. One of the key formal ways students have to provide feedback is through Student Experience of Learning Support (SELS) surveys. The feedback given in these surveys is anonymous and provides the Colleges, University Education Committee and Academic Board with opportunities to recognise excellent teaching, and opportunities for improvement.


**Policies**

ANU has educational policies, procedures and guidelines, which are designed to ensure that staff and students are aware of the University’s academic standards, and implement them. You can find the University’s education policies and an explanatory glossary at: [http://policies.anu.edu.au/](http://policies.anu.edu.au/)

Students are expected to have read the _Student Academic Integrity_ Policy before the commencement of their course. Other key policies include:

- Student Assessment (Coursework)
- Student Surveys and Evaluations

**Required Resources**

There is no single set text for this course, however there is a required set of readings. They are available online through the course Wattle site, mostly as links to pdfs at online journal archive sites, or as pdf files. Download and read them electronically or print as you see fit.

There is an expectation that your assignments will engage with the readings, both to establish that you have studied the scholarly literature and also to flesh out your arguments with contradictory or complementary points. Assignments that are light on referencing or that miss out on obviously relevant material from the readings and unlectures (and indeed other class activities) will be highly unlikely to get a good mark, and may fail on this basis alone.

**There are set readings for the first week of classes, so make sure you look at them ahead of time.**

There are two textbooks recommended for this course, which you are encouraged to buy if you intend to continue with science communication (Gilbert and Stocklmayer 2013) or want to pursue focus group-based science communication research in the future (Krueger and Casey 2009, or more recent edition 2015). Both are linked on Wattle. Accessing these will enhance your experience in this course, but they are not compulsory.
## COURSE SCHEDULE

<table>
<thead>
<tr>
<th>week</th>
<th>monday class</th>
<th>tuesday class</th>
<th>key events</th>
</tr>
</thead>
<tbody>
<tr>
<td>wk 1</td>
<td>Intro to the course and discussion of first readings</td>
<td></td>
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<tr>
<td>20-21 Jul</td>
<td></td>
<td></td>
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<tr>
<td>wk 2</td>
<td>Interpretation 1: Intro to content analysis and Analysing scientist identities and science institutions</td>
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<tr>
<td>27-28 Jul</td>
<td></td>
<td></td>
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<tr>
<td>wk 3</td>
<td>Interpretation 2: Analysing science-related ideologies and science and technology issues <em>Case study: Doctor Who</em></td>
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<tr>
<td>3-4 Aug</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>wk 4</td>
<td>Production of sci-themed fic <em>Case study: Iron Man</em></td>
<td>Writing wiki contributions <em>(bring laptop to class if possible)</em></td>
<td>Tuesday 4-7pm Contact screening for next week</td>
</tr>
<tr>
<td>10-11 Aug</td>
<td></td>
<td></td>
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<tr>
<td>wk 5</td>
<td>Reception of science themed fiction</td>
<td></td>
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<tr>
<td>17-18 Aug</td>
<td></td>
<td></td>
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<tr>
<td>wk 6</td>
<td>Focus group research 1: Planning &amp; implementation <em>Case study: Contact</em></td>
<td></td>
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<tr>
<td>24-25 Aug</td>
<td></td>
<td></td>
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<tr>
<td>wk 7</td>
<td>Applications 1: Fiction for health promotion</td>
<td></td>
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<tr>
<td>31 Aug-1 Sep</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>teaching break</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>wk 8</td>
<td>Applications 2: Fiction and science teaching</td>
<td>Research project proposal due Wednesday</td>
<td></td>
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<tr>
<td>21-22 Sep</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>wk 9</td>
<td><strong>no class</strong> <em>(Fam &amp; Com Day holiday)</em></td>
<td>Focus group research 2: Transcription &amp; analysis</td>
<td>Reflective folio due Wednesday</td>
</tr>
<tr>
<td>28-29 Sep</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>wk 10</td>
<td><strong>no class</strong> <em>(Labour Day holiday)</em></td>
<td>Applications 3: Fiction and public engagement with science <em>Case study: The Big Bang Theory</em></td>
<td></td>
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<tr>
<td>5-6 Oct</td>
<td></td>
<td></td>
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<tr>
<td>wk 11</td>
<td>Applications 4: Fiction for action on climate change <em>Case study: The Day After Tomorrow</em></td>
<td></td>
<td>Wiki curation &amp; contributions due Wednesday</td>
</tr>
<tr>
<td>12-13 Oct</td>
<td></td>
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<tr>
<td>wk 12</td>
<td>Applications 5: Fiction to enhance non-fiction science books <em>Case study: Jurassic Park</em></td>
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<tr>
<td>19-20 Oct</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>wk 13</td>
<td><strong>no classes</strong></td>
<td>Evaluation results report due Friday</td>
<td></td>
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<tr>
<td>26-27 Oct</td>
<td></td>
<td></td>
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<tr>
<td><strong>first week of exam period</strong></td>
<td></td>
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</tr>
</tbody>
</table>

### Guest Lecturers

- Week 4: Rudi Spennemann, SCOM Honours graduate: audience attitudes towards futuristic tech in *Iron Man*
- Week 5: Jarrod Green, SCOM PhD student: theories of audience reception, persuasion and identification
- Week 10: Rashel Li, SCOM PhD student: audience perceptions of science in *The Big Bang Theory*
- Week 12: Carmel Foley, SCOM Minor graduate: scientists’ uses of *Jurassic Park* in popular science books
ASSESSMENT REQUIREMENTS

Assessment Tasks
See pages 8-24 for detailed descriptions of all assessment tasks and marking criteria.

Participation
Participation in this course is not assessed, but reflection upon the class activities for some weeks IS assessed in the ‘Reflective folio’ assessment item. For that reason, attending and participating actively is important. In addition, most class activities are designed to be very interactive - there are very few lectures - so it is not possible to record most classes. For that reason it is difficult (though not impossible) to complete this course without attending regularly.

Actively participating in your own learning will also enable you to get the most out of this course. You are expected to read the required readings for each week before the first class. The basic premise of the course is that instead of having lectures each week, in most weeks we will have ‘unlectures’ (as well as creative activities, skills workshops, and more fun, hands on, useful activities). In an unlecture, you the students will pool your collective knowledge on a given topic, drawn from the readings, and together build up a picture of everything that we know about that topic. This is a much more effective way to learn something that sitting back passively and absorbing what a lecturer thinks about the readings. Ideally you will leave the course a more experienced and critical reader, with a deep and broad knowledge of the academic literature on this subject. For this reason, the readings are compulsory and central to the course. In your reflective folio you will make notes on the readings as you read them, as well as on the classes as you experience them, so you will be assessed on how deeply you have engaged with the readings.

Assignment submission
The ANU is using Turnitin to enhance student citation and referencing techniques, and to assess assignment submissions as a component of the University's approach to managing Academic Integrity. For additional information regarding Turnitin please visit the ANU Online website. Students may choose not to submit assessment items through Turnitin. In this instance you will be required to submit, alongside the assessment item itself, copies of all references included in the assessment item.

Online Submission: All SCOM6003 assignments are to be submitted using Turnitin via Wattle. Your curatorial and written contributions to the wiki will first be posted on the course wiki, but must then be copied into a single document and submitted via Turnitin by the deadline (see the assignment description for details). When submitting assignments via Turnitin, you will be required to electronically sign a declaration as part of the submission of your assignment. Please keep a copy of the assignment for your records.

Extensions and penalties
Extensions and late submission of assessment pieces are covered by the Student Assessment (Coursework) Policy and Procedure.

The Course Convener may grant extensions for any assessment pieces. If you need an extension, you must request it in writing on or before the due date. If you have documented
and appropriate medical (or other) evidence that demonstrates you were not able to request an extension on or before the due date, you may be able to request an extension after the due date.

Irrespective of when you request it, to receive an extension you must provide a copy of any evidence that documents why you need an extension (e.g. medical certificate, counsellor’s note, police report, etc). You will be granted the extension only if the circumstances necessitating an extension are beyond your control and could not have been reasonably anticipated, avoided or guarded against - see the ANU policy on this. Ongoing disabilities and medical conditions are a possible exception to this, if you are registered with Disability Services and they have determined that you may be entitled to extensions routinely.

Late submission of assessment tasks without an extension are penalised at the rate of 5% of the possible marks available per working day or part thereof. Late submission of assessment tasks is not accepted after 10 working days after the due date, or on or after the date specified in the course outline for the return of the assessment item.

**Resubmission of assignments**
Students may sometimes be offered the opportunity to resubmit an assignment if they are in danger of failing the course. Talk to the Course Convenor any time if you believe you are in that situation.

**Referencing requirements**
Science communication students can use any recognised academic reference system of their choosing in SCOM courses, provided referencing is complete, comprehensive and correct.

**SUPPORT FOR STUDENTS**
The University offers a number of support services for students. Information on these is available online from [http://students.anu.edu.au/studentlife/](http://students.anu.edu.au/studentlife/).
ASSESSMENT TASKS

REFLECTIVE FOLIO

This assessment item tests the breadth of your learning in the course, and your ability to think about what you’re learning in terms of professional science communication activity.

The product that you will hand in is a document that records your intellectual journey in the first half of the course. It will function as a record of the reading, thinking, discussion and participation that you have done during that time.

You must write a MAXIMUM of 2-3 pages each week. Those 2-3 pages should contain critical reflection on your progress on the assessment items, the set readings and the scheduled classes (for details of each week, see table on the next page). The notes you make will be useful for discussing course readings in class, and you can then add further insights to your weekly summary based on what the class has to say.

Ideally you will write much more than the required few pages each week for your personal use and for your future reference, but you should whittle this down to 2-3 pages of succinct critical reflection for assessment purposes. People handing in more lengthy folios will be asked to rewrite them before they are marked.

The idea is that instead of drifting passively through the course, you are constantly thinking about it, and helping yourself learn the material by writing it down. By forcing yourself to summarise classes and critique readings, you are forcing yourself to think through tricky and difficult material, and reinscribing it on your own memory through the multiple steps involved - reading, writing notes, summarising, then discussing with the class, and finally polishing your critical reflections to hand them in. This should also help you improve your marks in your other assessment, since you will already know the material well and it will be much less work to apply that knowledge to a new context, as well as reflecting on your progress on the assessment as you go along within the folio.

If you’re not sure how to start, here are some ideas. When you discuss your progress on the other assessment items, consider how they relate to your professional ambitions and activities as a science communicator - how you can make the most of the content of this course in your career. When you summarise and critique the set readings, consider the following questions (but don’t simply answer them in your folio - write down the most interesting insights that arise from your consideration):

- What does the paper say about previous work on the subject?
- What did this paper set out to do that was different from previous work? Why did the researchers want to do it?
- How did the researchers approach achieving their aim?
- What did they find out? What did they conclude?
- What is the central argument of the paper?
- What aspects of the paper do you agree or disagree with?
- What are the strengths of the paper, in terms of methods, assumptions, theories, etc?
- What are the weaknesses of the paper? What would you like to have seen that wasn’t there? How would you have approached it differently?
- What is the major contribution of this paper to the discipline of science communication?
When you discuss the classes, consider these questions:

- What activities took place in the class?
- What was the stated purpose of those activities? Did they succeed or fail in your view?
- What was new for you about today’s class in terms of knowledge or skills?
- What did you know already that was reinforced for you?
- What could have been done better? Why?
- What insights did you gain from discussions and unlectures?
- How could you use the class material in other contexts?

Note that you should reflect only on lectures or class activities in which students actively participate - a reflection comprised solely of comments about a film or television show viewed during class time will not be deemed sufficient to earn a mark for that week.

You do not have to answer all of these questions in your 2-3 pages of critical reflection. In fact, you probably won’t have the space to do that well. Use them to guide your thinking. The best reflective folios will take these kinds of questions into account but will move the critical discussion into new and original directions.

The maximum mark you can earn for the assignment is 20. If your folio includes reflections on every required reading and class your assignment will be marked out of that maximum. The quality of your reflections and critiques will be given a percentage mark (e.g. 60% for work of a low credit standard), and your final mark for the assignment will be that percentage x the maximum mark, e.g. 60% x 20 = 12 (final mark).

However, if some readings or classes are missing from your folio, the maximum mark you can earn will be reduced according to the following rubric:

<table>
<thead>
<tr>
<th>Component</th>
<th>Marks lost from maximum possible mark if component missing from folio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total 20 marks</td>
<td></td>
</tr>
<tr>
<td>Classes weeks 1-8</td>
<td>4 (0.5 per week)</td>
</tr>
<tr>
<td>Week 1 readings</td>
<td>1.5 (Kitzinger (worth 1) plus 1 short ones from list (worth 0.5 each))</td>
</tr>
<tr>
<td>Week 2 readings</td>
<td>3 (Haynes, Weingart et al., Flores)</td>
</tr>
<tr>
<td>Week 3 readings</td>
<td>2 (Orthia 2011, Orthia 2013)</td>
</tr>
<tr>
<td>Week 4 readings</td>
<td>2 (Reid, Kirby)</td>
</tr>
<tr>
<td>Week 5 readings</td>
<td>2 (Orthia et al., Bates)</td>
</tr>
<tr>
<td>Week 6 readings</td>
<td>1 (Steinke)</td>
</tr>
<tr>
<td>Week 7 readings</td>
<td>2 (choose 1 from list of 3 long ones (worth 1 mark each), plus 2 from list of 4 short ones (worth 0.5 marks each))</td>
</tr>
<tr>
<td>Week 8 readings</td>
<td>2.5 (Barnett et al. (worth 1) plus 3 short ones from list of 5 (0.5 each))</td>
</tr>
</tbody>
</table>

Due week 9 - do not include reflections on weeks 9-12.

For example, if your folio is missing 3 short readings from week 8 (=1.5 marks) and 7 weeks of classes (=3.5 marks), your new maximum mark will be reduced by 5 marks to 15.
The quality of the reflections and critiques that you have included will then be given a percentage mark in the same way as above (such as 60%), but your final mark will be calculated using the new possible maximum, e.g. 60% x 15 = 9 (final mark).

Exception: your maximum mark will not be reduced for missing classes or readings if you were excused from participating in those weeks of the course because of illness etc - talk to Lindy about this if necessary.

The rubric tells you the maximum mark your folio will be marked out of. But as noted above, the quality of your work is marked separately. Generally speaking:

- reflections that are inaccurate or very brief will receive a fail mark;
- reflections that are merely descriptive or summaries will receive a P or C;
- reflections that are critical, analytical, synthetic, and/or highly original will receive a D or HD.

If you are unsure about the quality of your work, you can submit a 2-3 page excerpt (i.e. a draft reflection on one week’s material) to Lindy for feedback. You can do this at any time during the semester, but the earlier the better. If Lindy receives 30 samples the week before either part of the folio is due she will not have time to give feedback on all.

**Marking criteria**

What your assignment should ideally demonstrate:

- 2-3 pages for a given week’s material - that page limit is both a minimum and a maximum requirement to get any marks for that week.
- accurate summaries and insightful, original critical reflections on the readings and classes and their significance for professional practice in science communication.
- reflections that clearly distinguish the most central or most important elements of the readings or classes to focus on, rather than giving equal attention to absolutely everything that was said or done.
- evidence of improvement in critiquing and engaging with the literature and classes.
- evidence of improved understanding about the nature and relevance of your other assessment items for professional practice.
- writings that are always relevant to the course subject matter without losing focus.
- articulate, succinct, well-ordered, and well-crafted prose that does not waffle or pad.
- references to readings, activities etc that are easy to trace or remember specifically (i.e. not vague).
- regular contributions to class unlectures and activities. Your participation in class might be taken into consideration when your folio is marked. In effect this will mean that your mark for the folio may be tweaked up or down if your participation in class and group discussions was very good or very poor, and if that level of participation did not match the quality of the folio itself.
WIKI CURATION AND CONTRIBUTIONS 20%

This assessment item tests the depth of your learning in the course about one or more particular topics of your choice, as well as your ability to manage and improve others’ communication efforts in a public domain communication product.

A wiki has been set up specifically for this course, at the URL http://scienceinpopularfiction.wikispaces.com. This wiki will be made public during the early stages of the course. The wiki has two kinds of pages on it:

- bibliographic pages: pages that detail and cross-reference journal papers relevant to this research area, to enable you to find relevant literature for your assignments relatively easily.
- content pages: pages that summarise the scholarship on a particular topic in this research area.

For this assignment, you may engage in two kinds of activity. The first is compulsory, while the second will depend on how much work goes into the first.

First, in a group with the other SCOM6003 students you will review the existing content pages on the wiki, whose content has been written by SCOM2003 students. As a group you will make decisions about what kinds of editing work needs to be done with the existing content, for example:

- should some pages be merged together, if they cover very similar topics?
- should some pages be split, if they cover a very broad topic?
- which pages need to be edited for readability, structure, style, references?
- which pages need to be fleshed out with additional information, because they are incomplete and make little sense?
- what kinds of categories of material can you create, and how should you cross reference pages?

As a group, and with the course convenor’s involvement and approval, you will then divide up the editing work that has to be done among yourselves and complete it. Your editing ‘curation’ of the wiki will comprise part of your assessment for this item, or possibly all of it if there is a lot to do - the course convenor will determine this in discussion with you. The work that you agree to do will be listed in a written document for the future reference of students and course convenor. Your performance in this assessment item will be marked against that documentation.

Second, if required by the course convenor, you will produce 500 words of scholarly-quality, wiki-style writing for the wiki and post it on one or more existing content pages, once you have identified remaining gaps through your curatorial activities. With the course convenor’s approval, you can choose to create a new page, but this would only be if the curatorial duties were relatively light.

Because the wiki will be public, your work will be in the public domain, so you should consider your audience when editing and writing contributions. You can imagine your audience to be relatively well educated people interested in this general topic area but who don’t know much about it specifically. Remember also that researchers and students in this
field may wish to use this wiki as a resource, so you should pitch the ideas at a relatively sophisticated level. However, ideas and language are not the same, so no matter how sophisticated your synthesis, your language should avoid specialist terms and jargon, and you should write in succinct, articulate, accessible sentences. You (and those whose work you are edited) are summarising existing work so you should avoid making your own personal comments or giving opinions - everything you say should be ‘referenced’ by a link to the source. Of course you must also avoid writing anything illegal, offensive or libellous, as well as plagiarism of course, and report any comments you are concerned about of that nature. In week 4 we will devote one 2 hour class to how to write for this wiki, and the course convenor will meet with SCOM6003 students separately to discuss how to edit it.

To submit this assignment you must do two things. You must ensure all your editorial work and any new written contributions are posted to the wiki itself before the due date. In addition, you must submit a record of your contributions to Turnitin in a single MS Word document:

- any new written contributions should be copied into the document and marked as your original writing.
- any editorial work should be submitted as ‘before’ and ‘after’ work: submit a copy of the original version of a page you have edited, and the new version after you edited it, with changes tracked, so the marker can see what you did. To facilitate this, as well as to ensure the quality of your work is good before you post it on the wiki, it is probably best for you to edit the wiki page in the MS Word document itself. Then you can post the version you’re happy with to the wiki and also hand it in easily for marking.

You must then submit the document containing all these changes via Turnitin on Wattle, also before the due date.

**Marking criteria**
To be eligible for a pass on this assignment:

- your editorial contributions must be evident from the record of your activities on the wiki.
- spelling, grammar and punctuation must be reasonable.
- if required, your original written contributions must total about 500 words ±10%.
- any original written contributions must include some references to the scholarly literature, in the form of links to bibliographic pages on the wiki or reliable quality external online material.
- your work must be both posted on the wiki and submitted via Turnitin.

What your assignment should ideally demonstrate:

- active contributions to the group’s decisions about the curatorial/editing work that needs to be done to the wiki by SCOM6003 students. This will be observed by the course convenor during the decision-making phase.
- intelligent contributions to the group’s decisions about the appropriate scope of pages and page categories, and cross-referencing of material. This will be observed by the course convenor during the decision-making phase.
- a respectful and scholarly approach to editing SCOM2003 students’ wiki material, that brings out its strengths and sensitively fixes its weaknesses. This means leaving work alone when it is good and making changes where necessary -
making a whole lot of changes when they are not actually required will result in a low mark, as will failing to pick up on weaknesses.
• excellent quality proof-reading and editing, with immaculate spelling, grammar and punctuation and articulate prose.
• a good feel for a wiki style of writing and an understanding of your target audiences, as outlined above.
• an appropriate understanding of the purpose of this wiki, the ways it might be used, and therefore the level at which to pitch your ideas.
• for any original writings: an accessible, non-jargony, articulate, succinct summary of scholarship on your topic, which has originality in the synthesis but without personal comment or opinion.
This piece of assessment tests your ability to apply what you learn in this course to building a research-based proposal for a professional science communication product or event. In the first part, worth 40% of your mark in SCOM6003, you will present your proposal. In the second part, worth 20% of your mark, you will evaluate the proposal via a focus group discussion among appropriate professional science communicators (or postgraduate science communication students), which you will organise, run and analyse.

Note that you do not have to actually produce the product or event - you just have to produce a proposal for what it would be like. So you can envisage something large or expensive if it is appropriately justified using available scholarly evidence. However, coming up with an extremely elaborate idea that will realistically never happen is not good practice - make sure that your proposal emulates the kinds of events and products that science communicators and science communication organisations routinely produce. In addition, something well beyond your expertise will possibly end up looking ridiculous. If in doubt, come up with a very small idea that you know you can create a solid, concrete plan for. Anyone can imagine big ideas, the hard part is making them happen - so stretch yourself a bit but stick to what you know is within your capacity at this stage in your career.

Part 1: Product/event proposal document 40%

The product or event idea you propose can take almost any form or medium that comes within the remit of science communication - a science centre exhibit, a lesson plan for teaching some aspect of science, a web presence for communicating about a science topic, or whatever else takes your interest and builds on your existing expertise. It could even be a proposal for a new fiction text (such as a film or television series) specifically designed for science communication purposes, if you feel you have the expertise to create such a proposal. At its core you must use science-related fiction in some way as a frame or hook or basis for the product or event - the fiction element must play a meaningful, non-trivial role.

Whatever project idea you come up with, it needs to be well justified based on all of: science communication principles and aims; the scholarly literature about science, fiction and the public; and your content analysis of your chosen text(s). So make sure your project idea is sound in these three ways before proceeding with it.

The proposal should be written in the style of a professional organisational report appropriate to your chosen purpose. The structure is relatively flexible because it will depend on your aims and the proposal itself, but it should include:

- **Introduction.** Begin with a brief introduction/summary of what you argue for in your report.
- **Justification for science communication.** Continue with a review of relevant literature to justify the need for your product or event in science communication terms. Before you even get to the part where you discuss fiction, you need to show that your event or product will meet some general need within science.
communication. e.g. Why do you need a new approach to teaching thermodynamics to high school students? Why would your science centre want a new exhibit on nanotechnology? etc.

- **Content analysis.** You must include a critical content analysis of your chosen fiction text that shows how it is relevant to your proposed product or event. What characters, events, themes etc can you identify that ‘say’ something about the science you’re interested in communicating?

- **Evidence of previous success.** Add evidentiary weight to your content analysis with a second literature review which discusses the published research on science, fiction and the public, to demonstrate why and how the fiction element can be used effectively to communicate the science you want to communicate. i.e. What have others done before that was similar to your proposal and successful? What pitfalls does the literature suggest you should watch out for and how will you address those risks?

- **Design of event or product.** At the heart of your proposal you must describe what it is you propose to do, in detail. If it is a lesson plan, write it out in full. If it is an exhibit design, describe and perhaps draw what it would look like, how it would work. Whatever your idea is, here is where you need to bring it alive for us - describe it in sufficient detail that another science communicator could potentially pick up your document and create your product or event themselves. Link it back to the content analysis as much as possible - show the fiction text in context and the work it is doing for science communication. Remember the basics of good communication too - be clear about your aim, your audience, your key messages, and so forth. Show how your idea meets those needs.

- **Evaluation protocol.** You must complete your proposal by detailing a protocol of how you will go about evaluating your idea. The evaluation can take whatever form you like, but MUST include at least one focus group, to be conducted with a relevant group of ‘experts’ who can use their expertise to discuss the strengths, weaknesses and potentials of your proposed event or product. The experts can be relevant professionals you know who are happy to participate, or they can be other science communication students - that’s up to you. If you are serious about making this proposal a reality in your workplace, then it’s a good idea to ask real experts to participate, for example your workplace colleagues. If you are treating it solely as a training exercise and assessment task, then it’s fine to ask fellow students to participate instead.

In your evaluation protocol you must outline and justify - with reference to research methods textbooks and/or the scholarly literature - things like:

- Exactly what methodological steps will you take? Outline them step by step, in detail.
- What order will they go in?
- What will each achieve? Are any dispensable?
- What happens if something goes wrong with your plan?
- Where does the focus group fit in? What is it for?
- What kind of participants, and how many, will you need for your focus group? Will you need more than one focus group? Will you need any other participants, to participate in some other element of your evaluation?

And with specific regard to your focus group:

- How will you recruit participants to your focus group?
- How much will you reveal about the project to participants when recruiting them? (How might your decision affect your results?)
What you will say to participants before, during and after the focus group session? What questions will you ask the focus group participants during the focus group session?

How you will ensure participants are familiar with your proposal so that they can discuss it?

What environment will you run the focus group in? (Home lounge room? Public meeting room? Classroom? Food provided? etc)

Will you reward your participants? How? (How might this affect your results?)

How will you preserve participants’ anonymity? (Pseudonyms?)

How will you ensure participants are free to end their involvement at any time? What will you do if they walk out?

How long will you let the focus group discussion go for? (Hint: it takes about 6 minutes to transcribe 1 minute of recorded conversation)

How will you record the focus group discussion? How will you know who is speaking on the recording?

What kinds of demographic data will you collect about your participants? (Make sure each is relevant, or don’t collect them.) How will you collect these data?

Reference list. Finally you must include a list of all references you used within the report.

The reason for the high level of detail in your evaluation protocol is that for your next assignment you must to organise a real focus group to evaluate your proposal. You will need a detailed evaluation protocol to follow in that step. When you are planning the evaluation protocol, remember that to enable to experts to evaluate your idea, you need to find some way to present the idea to them. This might simply take the form of asking them to read the first parts of your proposal report (excluding the evaluation protocol, obviously), but that might be a lot to ask, since it will be quite long. It might be better to present the idea to them in the form of a short live presentation. Or during the focus group process you could ask them targeted questions relevant to your proposal without actually telling them the whole idea up front. It’s up to you how you do this, but the strategy you choose will probably make a difference to the kinds of evaluation results you get, so plan your approach to evaluation carefully.

Bear in mind also that the aim of your evaluation is to answer the overarching research questions: Is the proposal sound? What are its weaknesses? Its strengths? How can it be improved? The specific focus group questions you ask should enable you to answer these, but they should be much more specific than those overarching research questions. For example, your focus group questions might focus on your participants’ views about the relatability of your chosen fiction text, or whether your design is appropriate for your target audience. It’s up to you to determine what focus group questions to ask to enable you to answer the overarching research questions.

Marking criteria
To be eligible for a pass on this assignment:

• it must address all the points outlined above for inclusion in the report.
• it must be no more than 5000 words in length, excluding the reference list. This is a maximum, not necessarily an expectation, but note that the product/event design and evaluation protocol will take up a considerable number of words.
• spelling, grammar and punctuation must be reasonable.
• it must include some references to the scholarly literature.

What your assignment should ideally demonstrate:
• a well structured report that flows, is easy to read and makes sense.
• a report appropriately pitched for its audience: professional science communicators in a professional organisation who would realistically evaluate your proposal with an eye on available resources such as time and money.
• an idea for an event or product that is creatively envisaged, but grounded in science communication need, evidence of previous success, and a realistic sense of what is possible and what will work.
• extensive, high quality literature research in the parts of the report that draw on published literature: the justification for science communication, the content analysis if relevant, the review of previous uses of fiction to communicate science, and the evaluation protocol.
• a succinct and incisive analysis of what you think the fiction text says about the aspect of science you’re interested in.
• a well explained, detailed design for your product or event.
• a well explained, detailed evaluation protocol that will be easy to follow, and that demonstrates a good understanding of the requirements of focus group research, including a detailed plan for organising your focus group and recruiting participants, and a focus group script, instructions and questions.
• excellent scholarly referencing.

Part 2 - Evaluation results report

In the second part of this assignment, you must evaluate your proposal using the evaluation protocol you outlined in part 1, or a modified version of it, changed to accommodate suggestions from the marker.

As noted above, your evaluation protocol can include any kinds of evaluation activities that you like, but must as a minimum include at least one focus group. For this assignment then, you need to recruit your participants, run your focus group (and any other evaluation activities you have planned, such as surveys), transcribe it in full, and then analyse the results.

What you will hand in is an evaluation report that reads a little bit like the second half of a short journal paper, with an outline of the methods you used (changed from your proposal document to reflect methods you actually used, not just those you originally planned to use), results and discussion sections, and a brief conclusion. Because in the focus group you’ll be dealing with qualitative data, you may decide to combine your results and discussion sections and instead break up that material into thematic sections. Some of the course readings will demonstrate to you how this is done. In addition, your methods section should be substantially shorter than the original evaluation protocol you wrote, and will not need all that detail of exactly what you did and when. Summarise how you recruited participants, what questions you asked in the focus group, etc, in a way similar to how authors of journal papers have done that - with enough information for replicability, but with a lot of the nitty gritty details summarised rather than outlined step by step.
Since you are not actually writing a journal paper, there is no need to repeat all the material from your proposal - you can assume that this report is a modified version of the ‘evaluation protocol’ section of that proposal document. It’s as if, instead of merely proposing a strategy for evaluating your proposal, you already completed the evaluation when you wrote the proposal, and are presenting the results of it here. This is probably what you would do in real life - before actually presenting an organisation with a proposal, you would formatively evaluate the idea to ensure it was sound and strong, and could then use the results of that evaluation to strengthen your proposal.

To facilitate a quality evaluation, you must transcribe your focus group discussion in full - this will enable you to analyse the results more effectively. We will discuss approaches to transcription and analysis in week 9. As discussed in part 1, you must analyse your results with a view to answering the overarching research questions: Is my proposal sound? What are its weaknesses? Its strengths? How can it be improved? The purpose of your evaluation report is to answer those questions in detail, using the evaluation data you have collected. Your conclusion should briefly summarise what you found and reflect succinctly on any limitations of the methods.

**Marking criteria**
To be eligible for a pass on this assignment:

- it must be no more than 2000 words in length excluding references.
- spelling, grammar and punctuation must be reasonable.
- you must attach a full focus group transcript as ‘part 2’ of the assignment. This does not count towards the word count. The assignment must demonstrate with clear evidence that you conducted a real focus group. Remember that fabricating data is a breach of the ANU Code of Practice for Student Academic Integrity, and in ‘real’ research would be treated as scientific fraud.

What your assignment should ideally demonstrate:

- appropriately revised and cut down methods section, reworked to be relevant to what you ended up doing and writing about.
- evidence that you incorporated any suggestions for changes to your methods made by the marker on your project proposal, or a clear justification for why you did not incorporate the suggestions.
- clear and succinct presentation of data and findings.
- comprehensive, succinct, articulate, clear and intelligent analysis and discussion of the focus group data and any other data. You should invest considerable energy in making a really tight analysis and critical discussion.
- clear, objective conclusions about the value, strengths and weaknesses of your proposal and how it could be improved, based on your data.
- critical reflection on potential limitations of the methods, how they may have affected the results, and how they affect our ability to draw conclusions.