Student-Generated Science Podcasts and Videos as a Means of Science Outreach

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COMMUNICATING SCIENCE: SCIE 300

SCIE 300 is a new undergraduate course within the Faculty of Science at UBC that introduces students to a variety of methods for communicating scientific information to diverse audiences.

COURSE GOALS

- Communicate scientific information to scientific audiences
- Critically appraise scientific information and reporting
- Communicate scientific information to non-expert audiences

MOTIVATION

Amazing that these skills are not taught but are expected.

There should be a course that prepares us to read and criticize scientific papers…and also to write them more effectively.

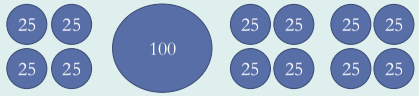
Detailed instruction on how to make good posters and oral presentations, not just expecting us to know how.

I find my writing skills are lacking.

Source: Faculty of Science student satisfaction surveys, 2010

COURSE DETAILS

- Three credits, one term, counts towards communication credit requirements
- Small sections (max 25 students), 50-min classes
- Third- and fourth-year science students in the **Combined Major in Science** program: cms.science.ubc.ca
- Space also available for other science students



Monday: Sections meet separately for group work on class projects

Tuesday: All sections meet together for main "lecture" day; also used for guest speakers

Wednesday and Friday: Sections meet separately for discussions and activities based on Tuesday's class; also used for writing skills workshops and presentations

SCIENCE OUTREACH PROJECT

SCIE 300 students select a research article from a pool of recently published papers authored by UBC faculty or graduate students. Working in groups, they deliver a multimedia blog post that includes a self-produced video and podcast about the research.

PRODUCTION PROCESS

Select a recently published research paper

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Production plan: students submit details including the intended focus of the podcast and video, their proposed interview questions, their proposed filming locations, and a list of additional footage they will need

↓ ↔ Feedback

Filming: students interview the researcher and collect additional footage

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Scripts: students submit podcast and video scripts that include interview excerpts and the supporting narration they have written

↓ ↔ Feedback

Production: students edit their interview footage, narration, and additional footage into a podcast and video

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Final submission: students embed the podcast and video within a post on the course blog written in journalistic style

RELATED COURSE TOPICS

Telling science stories: storytelling techniques, analyzing examples

Audience: identifying the audience and targeting scientific information for the intended audience

Science journalism: culture of science vs. culture of journalism, structure of news articles, analyzing best-practice examples of print, audio, and video journalism

Science blogging: strengths and weaknesses of science blogging, using digital content appropriately, creative commons licensing, using WordPress

Writing skills: clarity, conciseness, avoiding jargon, metaphor, analogy, quotations, active and passive voice

EXAMPLES OF STUDENT WORK

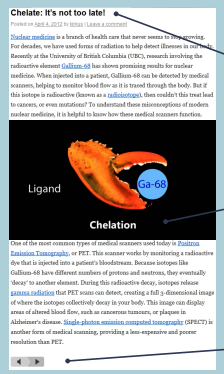
Original paper:
Acyclic Chelate with Ideal Properties for ^{68}Ga PET Imaging Agent Elaboration
Boros et al. (2010) *J Am Chem Soc*

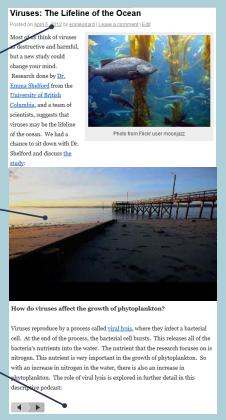
Original paper:
Virus-driven nitrogen cycling enhances phytoplankton growth
Shelford et al. (2012) *Aquat Microb Ecol*

Read the full blog posts

Watch the videos

Listen to the podcasts





Contact: For more information about SCIE 300 or about this project, please contact jandciu@mail.ubc.ca

PROJECT EVALUATION

Emphasis is placed on how the science story is told, rather than the technical aspects of creating audio and video pieces. Some evaluation criteria used are:

Blog post

- Writing style, clarity, focus, suitability for intended audience
- Creativity
- Scientific accuracy
- Logical integration of audio and video
- Proper attribution of images and other digital content

Podcast and video

- Introduction/hook
- Flow, organization
- Proper attribution of supplemental video footage, images, music, sound effects
- Quality of narration
- Choice of clips
- Creativity
- Clarity of conclusion and take-home message

PROJECT FEEDBACK

I thought it would just be us asking questions and them giving us answers… but instead it was more like we created a story.

Students, SCIE 300

In addition to the obvious student learning benefits, our researchers also benefit by learning how to communicate their findings to a broader audience.

Simon Peacock, Dean of Science, UBC

I was forced to really understand the technical paper we were working with, and boil it down to the bare bones…I think I was able to apply all the skills I acquired over the term in this script.

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- Researcher volunteers
- TAs: Rebecca Cheung, James Proudfoot, Hayley Dunning, Nick Fishbane
- SCIE 300 students