Integrating Ethical Reasoning and Information Literacy in a Nanotechnology Grand Challenge course

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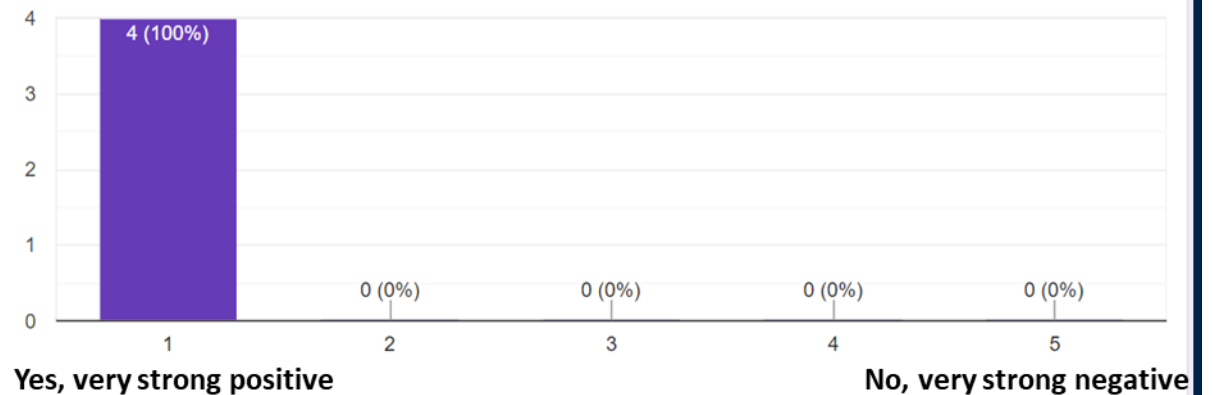**Assistant Professor**

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Students developed skills to :

(i) identify **credible sources** for their research,

(ii) Use **ethical reasoning** to weigh pros and cons of any emerging technology

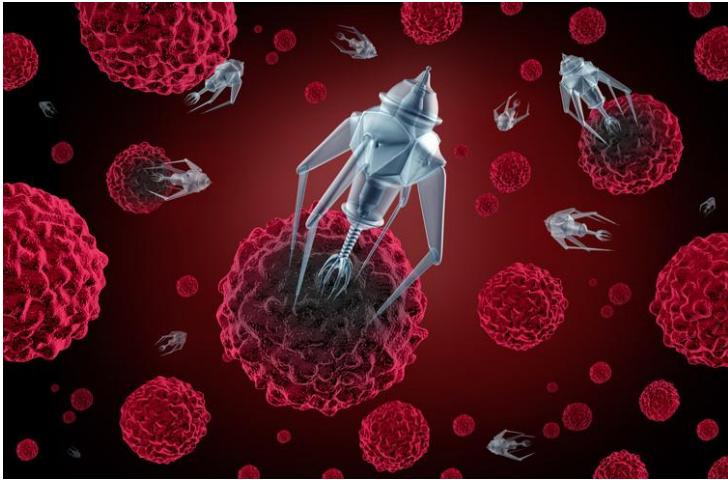Would you recommend this course to other students (on a 1-5 scale)?

4 responses

Integrating Ethical Reasoning and Information Literacy in a Grand Challenge course
Course: (BPS/CHE 204G – Nanotechnology: It's a Small World)

BACKGROUND

Key objectives of this course:

- To familiarize students with conducting literature searches and identifying credibility of their sources.

- To weigh the ethical and social implications of implementing emerging technologies (e.g., nanotechnology) to make informed decisions as consumers of these technologies

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COURSE CHANGES

Information Literacy

- Introduced lecture on scientific literature search

- In-class discussions using sample news articles, blog posts, research articles, web content

- Homework assignment to list bibliography to be used in the final report - students had to explain why they thought these references were credible.

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COURSE CHANGES

Ethical Reasoning

- Introduced lecture on Nano-ethics
- In-class discussions on ethical theories and which theory is most applicable according to them in the area of nanotechnology
- Ethics incorporated in midterm and final poster presentations

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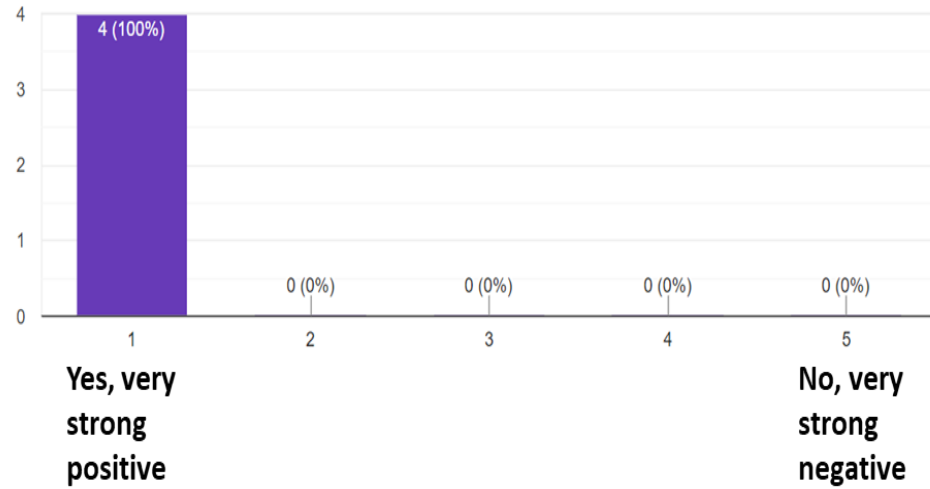## _Course:_ (BPS/CHE 204G – Nanotechnology: It's a Small World)

IMPACT

Online survey carried out at the end of class (Spring 2020)

Question: What are 2-3 important things you learnt from this course?

Anonymous student responses:

- Ethics, grand challenges, and citing sources

- 1. materials at the nanoscale behave differently 2. there are many misconceptions about nanotechnology 3. there are more ethical considerations than I would have imagined before

Would you recommend this course to other students (on a 1-5 scale)?

4 responses

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DISCUSSION

I would like to believe that this course gave the students some of the tools needed to:

- Weigh the pros and cons of emerging technologies
- How to ensure that the information they have is from a credible source

Next steps:

When offered for the first time (Spring 2020), the course had an enrollment of only 15. Next step is to work with a larger number of students to get more feedback on how to carry out these discussions more effectively.

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THANK YOU

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