UNSW Course Outline

GENS4015 Brave New World: Science Fiction, Science Fact and the Future - 2024

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General Course Information

Course Code : GENS4015
Year : 2024
Term : Term 1
Teaching Period : T1
Is a multi-term course? : No
Faculty : Faculty of Science
Academic Unit : School of Physics
Delivery Mode : Online
Delivery Format : Standard
Delivery Location : Kensington
Campus : Sydney
Study Level : Undergraduate
Units of Credit : 6

Useful Links

Handbook Class Timetable

Course Details & Outcomes

Course Description

This fully online and asynchronous course aims to give a big picture overview of the physical

sciences at the present time, with a particular emphasis on astronomy. The most common interface between the general public and science is often through science fiction; hence, science fiction is used as a teaching aid to stimulate student interest and as a starting point from which to communicate the science and its likely future development. This course also examines the interaction between science and society, encouraging students to consider how culture influences science and vice versa. This course aims to provide students with the level of scientific and technological literacy required to take an informed part in debate on important scientific issues.
The areas covered include the physics of space and time; astronomy; space travel and exploration; astrobiology; artificial intelligence; the future of planet Earth and the Universe and brief look at the place of physics in popular culture.

Course Aims

The aims of this course are to:

give a big picture overview of the physical sciences at the present time, with an emphasis on astronomy;

use science fiction media as a starting point for communicating science and its likely future development;

provide students with the level of scientific and technological literacy required to take an informed part in debate on important scientific issues;

examine the interaction between science and society, encouraging students to consider how culture influences science and vice versa;

develop students' skills in communicating science to the general public.

Course Learning Outcomes

Course Learning Outcomes
CLO1 : Evaluate the literary and rhetorical techniques by which scientific topics are represented in science writing and fiction.
CLO2 : Critically evaluate the social value and social impact of scientific and technological developments.
CLO3 : Apply mathematical and physical reasoning to predict the behaviour of systems in an astronomical context.
CLO4 : Explore a scientific topic from the course in a creative format, employing the domain-specific skills of your area of study (short story, video, artwork, essay, computer program, schematic, etc).

Course Learning Outcomes	Assessment Item
CLO1 : Evaluate the literary and rhetorical techniques by which scientific topics are represented in science writing and fiction.	• Project Proposal, Peer Review and Reflection • Written/Creative Assignments
CLO2 : Critically evaluate the social value and social impact of scientific and technological developments.	• Project Proposal, Peer Review and Reflection • Written/Creative Assignments
CLO3 : Apply mathematical and physical reasoning to predict the behaviour of systems in an astronomical context.	• Quiz
CLO4 : Explore a scientific topic from the course in a creative format, employing the domain-specific skills of your area of study (short story, video, artwork, essay, computer program, schematic, etc).	• Term Project • Project Proposal, Peer Review and Reflection

Learning and Teaching Technologies

Moodle - Learning Management System

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Quiz Assessment Format: Individual	15%	
Term Project Assessment Format: Group	25%	
Project Proposal, Peer Review and Reflection Assessment Format: Individual	40%	
Written/Creative Assignments Assessment Format: Group	20%	

Assessment Details

Quiz

Assessment Overview

Upon engaging with each lecture video in weeks 4 and 8, you will complete the embedded interactive quizzes on the science topics being discussed. Questions will have multiple choice or short answer formats.

Each question will have the same weighting, and all questions over the course of the term will contribute 15% of your final course mark. Feedback will be available immediately upon completion of each quiz.

Course Learning Outcomes

- CLO3 : Apply mathematical and physical reasoning to predict the behaviour of systems in an astronomical context.

Term Project

Assessment Overview

Your term project will be due at the end of Week 10. It will be a creative project that explores one science topic from the course using science fiction, public science, or critical media as resources.

You will create your term project based on your initial proposal plus input from the instructors and your peers. Full details on possible project forms and fiction/media resources will be distributed via Moodle.

Course Learning Outcomes

- CLO4 : Explore a scientific topic from the course in a creative format, employing the domain-specific skills of your area of study (short story, video, artwork, essay, computer program, schematic, etc).

Project Proposal, Peer Review and Reflection

Assessment Overview

You will write a one-page proposal outlining the form and topic for your term project (Week 3), read and provide constructive commentary on three other students' proposals (Week 5), and write a one-page reflection on the development of your project idea over the course of the term (Week 8). For the reflection activity you will describe how your project idea has changed as a result of the feedback you have received from your TA and from the peer reviews, and any changes or progress you have made as you have continued reading your source materials and thinking about the project.

The project proposal will be worth 20% of your overall mark, the peer reviews 10%, and the reflection 10%. Written feedback on all three components will be available online within a week of completion.

Course Learning Outcomes

- CLO1 : Evaluate the literary and rhetorical techniques by which scientific topics are represented in science writing and fiction.
- CLO2 : Critically evaluate the social value and social impact of scientific and technological developments.
- CLO4 : Explore a scientific topic from the course in a creative format, employing the domain-specific skills of your area of study (short story, video, artwork, essay, computer program, schematic, etc).

Written/Creative Assignments

Assessment Overview

You will have three short assignments in Weeks 4, 7 and 9 that all contribute equally to your final mark. These will include written and visual projects of 1-5 pages and video projects of at least 2 minutes. The topics will include artificial intelligence in society, cultural representation in popular media, and habitability of planetary environments.

Written feedback will be made available online within a week of completion.

Course Learning Outcomes

- CLO1 : Evaluate the literary and rhetorical techniques by which scientific topics are represented in science writing and fiction.
- CLO2 : Critically evaluate the social value and social impact of scientific and technological developments.

General Assessment Information

Grading Basis

Standard

Course Schedule

Attendance Requirements

Not Applicable - as no class attendance is required

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
	Sarah Martell					No	Yes

Other Useful Information

Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University's conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University's reputation and good standing.

For more information, visit the UNSW Student Code of Conduct Website.

Academic Honesty and Plagarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.
Further information about referencing styles can be located at https://student.unsw.edu.au/referencing

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.
Further information about academic integrity, plagiarism and the use of AI in assessments can be located at:

- The Current Students site,
- The ELISE training site, and
- The Use of AI for assessments site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: https://student.unsw.edu.au/conduct

Submission of Assessment Tasks

Penalty for Late Submissions
UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: https://student.unsw.edu.au/special-consideration

Important note: UNSW has a "fit to sit/submit" rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

Faculty-specific Information

Additional support for students

- The Current Students Gateway
- Student Support
- Academic Skills and Support
- Student Wellbeing, Health and Safety
- Equitable Learning Services
- UNSW IT Service Centre
- Science EDI Student Initiatives, Offerings and Guidelines