



COURSE OUTLINE

1. **Course:** SCIE 529, Project Course in Sustainable Energy, Environment and Economy - Fall 2023

Lecture 01 : TR 11:00 - 12:15 in TI 118/120

Instructor	Email	Phone	Office	Hours
Dr Jared Stang	jared.stang@ucalgary.ca	403 220-8073	SB 527A	By appointment.

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

In Person Delivery Details:

SCIE 529, Project Course in Sustainable Energy, Environment and Economy, is a term-long group project, culminating in a presentation and paper, on a topic of your choosing related to sustainable energy, environment, and economy. Course content will support student development of synthesis, analysis, design, communication, and collaboration skills (see Course Outcomes below) through learning as part of our classroom community.

Course team

- Instructor: Jared Stang, details above
- TA / co-instructor: AC Cameron, accamero@ucalgary.ca, MS 566, office hours to be determined.

Course communication

In-person communication is preferred for all course content and logistics questions. Speak with Jared or AC before or after class or at office hours with your questions. For personal questions, please contact Jared via email or in person after class or in office hours. Please expect a 5-business-day turnaround for email replies.

Course Site:

D2L: SCIE 529 L01 - (Fall 2023) - Project Course in Sustainable Energy, Environment and Economy

Note: Students must use their U of C account for all course correspondence.

Equity Diversity & Inclusion:

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

2. **Requisites:**

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

Prerequisite(s):

75 units (12.5 full-course equivalents) and admission to the Energy and the Environment Specialization, the Energy Management Concentration or the Energy Science Concentration.

3. **Grading:**

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
Consultations ¹	3%	Ongoing		
Short paper 1 ²	4%	Sep 10 2023		
Solo pitch ³	2%	Sep 14 2023		
Short paper 2 ⁴	4%	Sep 17 2023		
Notification of intent (Annotated bibliography, version 1) ⁵	10%	Sep 29 2023		
Group pitch ⁶	2%	Oct 05 2023		
Proposal (Annotated bibliography version 2) ⁷	20%	Oct 11 2023		
Detailed outline (Annotated bibliography version 3) ⁸	15%	Oct 23 2023		
Paper ⁹	25%	Nov 06 2023		
Presentation ¹⁰	15%	Nov 28 2023		

¹ Group: Ongoing in-class consultations with Jared or AC. For grading items labelled as "Group," all members of the Group earn the same score.

² Solo: Graded for peer feedback on others' short papers.

³ Solo: In-class solo pitch.

⁴ Solo: Graded for peer feedback on others' short papers.

⁵ Group.

⁶ Group: In-class group pitches.

⁷ Group: Includes proposal (worth 15%) and proposal peer feedback (worth 5%). Proposal initially due Oct 11.

⁸ Group. Initial deadline of Oct 23.

⁹ Group: Includes paper (worth 15%), peer review (worth 5%), and peer review reply (worth 5%). Paper initially due Nov 6. Final paper and peer review reply due Dec 6.

¹⁰ Group: Includes presentation proposal (worth 1%) and presentation (worth 13%). Solo: Attendance at all presentations (worth 1%). Nov 28 is first day for presentations, but your presentation date may be different.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	90 %	87 %	84%	81%	78 %	75 %	72%	69%	66 %	60 %

For grading items labelled as "Group," all members of the Group earn the same score.

The University of Calgary offers a [flexible grade option](#), Credit Granted (CG) to support student's breadth of learning and student wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: <https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade>

4. Missed Components Of Term Work:

In the event that a student legitimately fails to submit any online or in-person assessment on time (e.g. due to illness, domestic affliction, etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date, or possible exemption and reweighing of components. Absences not reported within 48 hours will not be accommodated. Students may be asked to provide supporting documentation ([Section M.1](#)) for an excused absence, See [FAQ](#).

If an excused absence is approved, options for how the missed assessment is dealt with is at the discretion of the coordinator or course instructor. Some options such as an exemption and pro-rating among the components of the course may not be a viable option based on the design of this course.

Most assessments in this course are done with your group. Early in your course, you will create arrangements in your group contract that account for possible absences in group activities.

For missed solo assessments due to illness or other extenuating circumstance, please contact the instructor within 48h of the assessment to discuss an accommodation.

5. **Scheduled Out-of-Class Activities:**

There are no scheduled out of class activities for this course.

6. **Course Materials:**

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

7. **Examination Policy:**

There is no course exam.

Students should also read the Calendar, [Section G](#), on Examinations.

8. **Approved Mandatory And Optional Course Supplemental Fees:**

There are no mandatory or optional course supplemental fees for this course.

9. **Writing Across The Curriculum Statement:**

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. **Human Studies Statement:**

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

11. **Reappraisal Of Grades:**

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work [form](#) to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar
- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

12. **Other Important Information For Students:**

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus

Mental Health Strategy website ([Mental Health](#)).

- b. **SU Wellness Services:** For more information, see their [website](#) or call [403-210-9355](tel:403-210-9355).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information regarding sexual violence to all members of the university community. Carla can be reached by email (syasa@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed [here](#).
- d. **Student Ombuds Office:** A safe place for all students of the University of Calgary to discuss student related issues, interpersonal conflict, academic and non-academic concerns, and many other problems.
- e. **Student Union Information:** [SU contact](#), Email your SU Science Reps: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca,
- f. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf>.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the [Request for Academic Accommodation Form](#) and sending it to Dr. Nicole Sandblom by email ntscdirector@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

- g. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional [Code of Conduct](#) and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

[Student Handbook on Academic Integrity](#)
[Student Academic Misconduct Policy](#) and [Procedure](#)
[Faculty of Science Academic Misconduct Process](#)
[Research Integrity Policy](#)

Additional information is available on the [Student Success Centre Academic Integrity page](#)

- h. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.
- i. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- j. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

Syllabus

The course schedule as shown here and in the grading rubric is subject to change.

Week	Topics / activities	Assessments
1, Sept 5-8	Welcome; background; literature searching (guest workshop, Bronte Chiang, Librarian)	Due Sunday Sept 10: Short paper 1
2, Sept 11-15	Story; peer feedback short papers; solo pitches	In-class Tuesday Sept 12: Short paper 1 peer feedback Due Wednesday Sept 13: Solo pitch Due Sunday Sept 17: Short paper 2
3, Sept 18-22	Peer feedback short papers; developing project ideas	In-class Tuesday Sept 19: Short paper 2 peer feedback
4, Sept 25-29	Reading papers and obtaining data; consultations	Due Friday Sept 29: Notification of intent
5, Oct 2-6	Scientific methods: metrics; group pitches	Due Thursday October 5: Group pitches
6, Oct 10-13 (Monday: Thanksgiving holiday)	Consultations; peer feedback proposals	Due Wednesday October 11: Proposal* Due Friday October 13: Proposal peer feedback
7, Oct 16-20	Writing outlines; consultations	
8, Oct 23-27	Figures, tables, abstracts; consultations	Due Monday October 23: Detailed outline*, Presentation proposal
9, Oct 30-Nov 3	Writing sentences and paragraphs; consultations	
10, Nov 6-10	Peer review papers	Due Monday Nov 6: Paper Due Friday Nov 10: Paper or detailed outline peer review
Term break		
11, Nov 20-24	Consultations; voice and performance (guest workshop, Julia Guy, Librarian)	
12, Nov 27-Dec 1	Presentations	Various dates: Presentation
13, Dec 4-6	Presentations	Due Wednesday Dec 6: Final paper, Peer review reply

*First deadline for these assignments. These carry a minimum standard for proceeding to the next project phase. Can resubmit in following weeks if needed to obtain minimum standard.

Assessments

The assessments in this course are designed to support your progress to the course outcomes of synthesis, analysis, design, communication, and collaboration.

- Early in the term, short solo papers give practice on scientific communication with reference support.
- The main group assessments---the notification of intent, proposal, detailed outline, and paper---carry your group through the key stages of a scientific project.
- The solo and group pitches and presentation provide practice for your communication skills.
- Frequent opportunity for peer feedback and review allows students to support each other in the course and learn by seeing what others are doing.

More details on all assessments are provided on D2L.

Inclusivity

SCIE 529 is a learning community that is welcoming of diverse backgrounds, experiences, and perspectives. This means that we strive for inclusivity in our classroom, virtual spaces, practices, and interactions. Mutual respect, civility, and the ability to listen to and observe others carefully are crucial; active, thoughtful, and respectful participation in all aspects of the course will make our time together as productive and engaging as possible. Please indicate if you have a preferred name that you'd like to be called. (You can update your preferred name in the "Personal Information" section of My UCalgary.) You are also encouraged to help others use your correct pronouns by including them on your name tent, if you're comfortable to do this. Discrimination or harassment of any form will not be tolerated. I also welcome any suggestions for improving the learning environment.

If you have a particular need to facilitate your learning in this course, please contact Student Accessibility Services (details in section 12.f) as soon as possible to arrange accommodations.

Illness

The scheduled course lecture time will be used for both delivery of course content and project-related activities. If you are ill, you should not attend class. If you miss classes with project-related activities, you will be required to coordinate with your group on an acceptable way for you to contribute.

Course Outcomes:

- Critically analyze current research and developments in the area of sustainable energy
- Advocate a solution related to the area of sustainable energy by researching all aspects of the topic to form and defend a stance on how the industry could best move forward on issues related to the topic
- Communicate ideas and concepts effectively in both written and oral presentations to both peers and the general public.
- Collaborate with peers to complete a project and presentation on their topic in sustainable energy
- Provide effective feedback to peers.

Electronically Approved - Aug 29 2023 13:58

Department Approval