



COURSE OUTLINE

1. **Course:** STAT 205, Introduction to Statistical Inquiry - Winter 2021

Lecture 01: MWF 11:00 - 11:50 - Online

Instructor	Email	Phone	Office	Hours
Dr. Sang Kang	sangjin.kang@ucalgary.ca	N/A	VIA ZOOM	Mon & Wed: 11:00 am~12:00 pm & 1:00 pm~2:00 pm / Fri: After the live Zoom session

Lecture 02: MWF 11:00 - 11:50 - Online

Instructor	Email	Phone	Office	Hours
Dr. Sang Kang	sangjin.kang@ucalgary.ca	N/A	VIA ZOOM	Mon & Wed: 11:00 am~12:00 pm & 1:00 pm~2:00 pm / Fri: After the live Zoom session

Lecture 03: MWF 13:00 - 13:50 - Online

Instructor	Email	Phone	Office	Hours
Dr. Sang Kang	sangjin.kang@ucalgary.ca	N/A	VIA ZOOM	Mon & Wed: 11:00 am~12:00 pm & 1:00 pm~2:00 pm / Fri: After the live Zoom session

Online Delivery Details:

Some aspects of this course are being offered in real-time via scheduled meeting times. For those aspects you are required to be online at the same time.

To help ensure Zoom sessions are private, do not share the Zoom link or password with others, or on any social media platforms. Zoom links and passwords are only intended for students registered in the course. Zoom recordings and materials presented in Zoom, including any teaching materials, must not be shared, distributed or published without the instructor’s permission.

This course has a registrar scheduled, synchronous final exam. The writing time is 2 hours + 50% buffer time.

The live Zoom session is held on the following time and date:

Date	Time
January 15 (Fri)	Starting at 11 am
January 22 (Fri)	Starting at 1 pm
January 29 (Fri)	Starting at 11 am
February 5 (Fri)	Starting at 1 pm
February 12 (Fri)	Starting at 11 am
February 26 (Fri)	Starting at 1 pm
March 5 (Fri)	Starting at 11 am
March 12 (Fri)	Starting at 1 pm
March 19 (Fri)	Starting at 11 am
March 26 (Fri)	Starting at 1 pm
April 2 (Fri)	Starting at 11 am
April 9 (Fri)	Starting at 1 pm
April 14 (Fri)	Starting at 1 pm

*** Students in Lec 01 & 02 are encouraged to join the first day course orientation meeting at 11:00 am - 11:50 am on January 11 (Mon).**

*** Students in Lec 03 are encouraged to join the first day course orientation meeting at 1:00 pm - 1:50 pm on January 11 (Mon).**

Be aware that only this first meeting will not be recorded due to the challenges of managing Q&A through chatting on Zoom.

*** Expectation for students:** Weekly portion of course materials are available week by week. Students are encouraged to meet the Checklist to enhance your learning process.

* **Live Zoom meeting:** The regular Zoom meeting is held on every Friday. Please note that the time to start live Zoom meeting is alternating for each week. **Make sure that the live Zoom meeting does not cover the pre-recorded video contents.** Rather, this session is purposed for the example practice for weekly material along with **live TopHat evaluation**. Detailed description of live TopHat evaluation is covered in Section 3 Grading.

* **Academic Integrity:** Due to the unique remote learning environment, we find the possibilities of cheating is a large concern of instructors and students alike. Basic mind-set is on trust between instructor and student and honesty to follow the common sense as students. Please refer to [Academic Integrity for students by Taylor Institute for Teaching and Learning](#).

Course Site:

D2L: STAT 205 L01-(Winter 2021)-Introduction to Statistical Inquiry

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

2. **Requisites:**

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

Prerequisite(s):

Mathematics 30-1 or 30-2 or Mathematics 2 (offered by Continuing Education).

Antirequisite(s):

Credit for Statistics 205 and any one of Statistics 213, 217, or 327 will not be allowed. Students may not register in, or have credit for, Statistics 205 if they have previous credit for one of Statistics 321 or Engineering 319 or are concurrently enrolled in Statistics 321 or Engineering 319.

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:

Component(s)	Weighting %	Date
Assignments (Best 5 out of 6)	7.5%	January 22 (Fri) / February 5 (Fri) / February 26 (Fri) March 12 (Fri) / March 26 (Fri) / April 9 (Fri) completed by 11:59 pm
Lab quizzes (Best 5 out of 6)	20%	January 25 (Mon) / February 8 (Mon) / March 1 (Mon) March 15 (Mon) / March 29 (Mon) / April 12 (Mon) * Duration of each quiz: 30 minutes plus 15 minutes * Available quiz windows: 12 pm~5 pm (during the available lab time)
Mid-term exam (2)	35%	February 22 (Mon) / March 22 (Mon) * Duration of each mid-term exam: 1 hour plus 30 minutes * Available exam windows: 12 pm~5 pm (during the available lab time)
Final exam	27.5%	To be scheduled by Registrar * Duration of the final exam: 2 hours plus 1 hour
Flexible grading	10%	Refer to below description
TopHat Bonus	Additional 3%	Refer to below description

* **Assignments:** The assignments are administered through MyStatLab provided by Pearson. Further description will be provided during the first day course orientation meeting.

* **Lab quizzes, mid-term exam, and final exam:** Those are administered through WebWork. Make sure to get used to the exam environment through WebWork, along with possible issues to avoid.

* **Flexible grading:** Out of the 2 mid-term exams and a final exam exam, the best of three will be awarded with 2/3 of the 10% portion of the grade. The second best will be award with 1/3 of the 10 portion of the grade.

* **TopHat Bonus**

1. Asynchronous version of TopHat questions: For each week, a number of TopHat questions are assigned on the designated due date to complete the participation of problem-solving or conceptual check questions.
2. Live evaluation TopHat questions: These are linked to live participation in live Zoom session. Further instructions are provided during the first day course orientation meeting.

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 %	85 %	80%	75%	70 %	65 %	60%	55%	54.99 %	45 %

This course will have a final exam that will be scheduled by the Registrar. [The Final Examination Schedule](#) will be published by the Registrar's Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

The final exam will be administered using an on-line platform. Per section [G.5](#) of the online Academic Calendar, timed final exams administered using an on-line platform, such as D2L, will be available on the platform. Due to the scheduling of the final exams, the additional time will be added to **the end** of the registrar scheduled **synchronous** exam to support students. This way, your exam schedule accurately reflects the **start time** of the exam for any **synchronous** exams. E.g. If a **synchronous** exam is designed for 2 hours and the final exam is scheduled from 9-11am in your student centre, the additional time will be added to the **end** time of the **synchronous** exam. This means that if the exam has a 1 hour buffer time, a synchronous exam would start at 9 am and finish at 12pm. - updated April 6, 2021

A final exam mark of at least 50% is required on the final exam in order to earn a minimum letter grade of C- in the course.

4. Missed Components Of Term Work:

The university has suspended the requirement for students to provide evidence for absences. Please do not attend medical clinics for medical notes or Commissioners for Oaths for statutory declarations.

In the event that a student legitimately fails to submit any online assessment on time (e.g. due to illness 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. Absences not reported within 48 hours will not be accommodated. If an excused absence is approved, then the percentage weight of the legitimately missed assignment could also be pro-rated among the components of the course.

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

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

6. **Course Materials:**

Required Textbook(s):

Gould, Ryan, Stallard, Boue, *Introductory Statistics: Exploring the World through Data* Pearson.

If the hardcopy is hard to be purchased, it is highly recommended to purchase the digital version.

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:**

You will be provided with a .pdf document of formulae for (i) your mid-term exams and (ii) your final exam. You can either download the .pdf onto the same device you are using to write the same course evaluation or print it off.

You are allowed to have one browser window open for each of your lab quizzes, midterm exams, and final exam, that web browser being opened to WeBWork, along with StatCrunch provided by Pearson website. Additional web-browsers are not permitted at anytime during the writing of these course components.

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 www.ucalgary.ca/wellnesscentre 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 (syva@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed at (<https://www.ucalgary.ca/policies/files/policies/sexual-violence-policy.pdf>)
- d. **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](#)
[Research Integrity Policy](#)

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

- e. **Academic Accommodation Policy:** Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the procedure for accommodations for students with disabilities available at [procedure-for-accommodations-for-students-with-disabilities.pdf](#).

Students needing an accommodation in relation to their coursework or to fulfill requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Associate Head of the Department of Mathematics & Statistics, Mark Bauer by email bauerm@ucalgary.ca or phone [403-220-4189](tel:403-220-4189). Religious accommodation requests relating to class, test or exam scheduling or absences must be submitted no later than **14 days** prior to the date in question. See [Section E.4](#) of the University Calendar.

- f. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPPA). 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.
- g. **Student Union Information:** [VP Academic](#), Phone: [403-220-3911](tel:403-220-3911) Email: suvpaca@ucalgary.ca. SU Faculty Rep., Phone: [403-220-3913](tel:403-220-3913) Email: sciencerep@su.ucalgary.ca. [Student Ombudsman](#), Email: ombuds@ucalgary.ca.

- h. **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.
- i. **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.

Course Outcomes:

- Define a random variable; conceptualize its sample space, and calculate the likelihood of various events that random variable(s) could produce.
- Identify a targeted population and its corresponding target parameter. Display how various sampling methods can target a population, with minimal bias.
- Describe and analyze a random variable's properties through a visual and numeric examination of its distribution shape, measure of centre, and measure of spread
- Comprehend and display the Central Limit Theorem and its implications on statistical inference via confidence interval estimation and hypothesis testing. This is to include methodology for both qualitative and quantitative data types as well as for single and multiple population comparisons.
- Explain the correlation between bivariate data, again, for both qualitative and quantitative samples. Constructing the least-squares estimate when applicable.
- Demonstrate how to use critical thinking, formulae, and statistical software to provide solutions for both theoretical and practical applications of course material.

Electronically Approved - Apr 08 2021 09:28

Department Approval