STAT 251 - Elementary Statistics
2025 Summer Term 1 (May - June, 2025)

Course Description: Probability, discrete and continuous random variables, probability distributions, estimation, hypothesis testing, analysis of variance, regression.
Learning outcomes: Detailed learning outcomes are provided on the course website
Prerequisites: One of MATH 101, 103, 105, 121, SCIE 001.

Instructor: Dr. W. A. Lasantha Premarathna (Email: wpremara@stat.ubc.ca).

- Please use the email only for personal matters that you would want to discuss with the instructor.
- If you send me an email, make sure to include **STAT 251** in the subject line.
- Please use **office hours** and **Piazza Discussion Board** for questions regarding assignment problems/text book problems/labs class note examples etc.

Class Room Information: Please refer the Canvas Course page for the class room information

Lectures & Labs: in-person
Note: Please check the canvas course page regularly.

Instructor Office Hours:

- **Online office hour:** 1:00pm – 2:00pm on Thursday (Zoom link can be found through the zoom tab)
- **in-person:** Just after the class on Tuesday & Thursday (around 30 minutes each day). I will leave if there are no students to ask questions. Also you can meet me during the class break

Course Coordinator: Julia Peng (courses@stat.ubc.ca) - Please contact the course coordinator about any administrative questions. (e.g., late registration, lab registration, etc)

Head TA, Teaching assistants & TA office hours: Please refer the Canvas course page

Course Website: **canvas.ubc.ca**

- Please check the **Canvas** website regularly to keep up-to-date with the course. Everything you need will be available through Canvas and you should get familiar with all the tabs as soon as possible.
- If you have any problems related to technical issues, please use **?Help** (see the left side menu in the Canvas course page) to report the problem or to contact IT service.

Textbook:

- Course notes (free, download from Canvas. Check the module "Textbook & Suggested Problems" in the canvas course page)
- Additional references: Any recent editions "Probability and Statistics for Engineering and the Sciences" (by J.L. Devore)

Course Assessment

Assessment	Date	Percentage
Class question (iClicker Cloud)	in-class	3%
WeBWork(x10)	See the schedule in canvas page	10%
Labs (x8)	See the schedule in canvas page	7%
Written Assignments (x2)	See the schedule in canvas page	10%
Pre-lab quizzes	Refer the canvas course page	2%
Midterm	Wednesday, June 5 (6:00pm – 7:10pm) at the regular class room	23%
Final Exam (must pass the final exam to pass the course)	To be scheduled by Classroom Services. Exam schedule is released at least 3 weeks before the final day of classes. **Exam period:** June 23 - 27	45%

Note: Please refer Schedule in the Canvas Course page for deadlines

Bonus points:

- Students that have answered the most statistics-related questions in Piazza in a way that explains concepts well but does not reveal the answer to an assignment, lab, or webwork question will get a bonus 1% added to their grade. When you answer question, teaching team endorse your answers as "good answer". I add this 1% if you have more than 10 "Endorsed Answers"

Policy regarding missing the midterm:

- There will be no make-up exam.
- Students who miss an exam should notify the instructor prior to (if possible) or immediately after the exam to request an Academic Concession. Students must supply a supporting document (for example, a doctor's note will be sufficient in case of a medical emergency) within 3 days of the day of exam. Failing to contact the instructor may result in a grade of zero on the Midterm.
- If your request is approved by the instructor, your midterm weight will be moved to the final exam.

Deferred Exam Policy if you miss the Final Exam:

- The policy (UBC policy) is that students who miss the final exam MUST report to their faculty advising office within 48 hours to apply for deferred standing. They must also notify the instructor to receive instructions as to when they will write their deferred final. But they will not be granted a deferred final unless they are granted deferred standing by their faculty advising office.

Chapters to be covered:

- 1, 2, 3, 4, 5, 6, 7, 8, 10, & 11 (according to the free course not chapters) Detailed learning outcomes can be found on the course website. Refer to this document throughout the course to clarify the outcomes you are expected to attain for each section of the material.

Brief Course Description

- Descriptive Statistics (Ch. 1)
- Probability and probability models (Ch. 3)
- Random variables and distributions (Ch. 4-6)
- Central Limit Theorem (Ch. 7)
- Statistical estimation and hypothesis testing (Ch. 8)
- Analysis of variance (Ch. 10)
- Selected topics from regression (Ch. 2 & 11)

iClicker cloud:

- We will be using iClicker Cloud in lectures. iClicker Cloud is a response system that allows you to use your own computer or mobile device to respond to questions posed by instructors during class. You need to set up an iClicker Cloud account and add STAT 251 as a course to this account. To do so, please follow https://lthub.ubc.ca/guides/iclicker-cloud-student-guide for details.

Piazza Discussion Board:

- You can use "Piazza Discussion Board" to post your questions. This is where you can discuss ideas, strategies, and resources for solving the problems with your classmates. Please DO NOT POST ANSWERS to the questions in the WeBWork assignments/written assignments and Labs before the due date. Instead, share your thoughts and approaches to solving the problems. Asking others how to solve a problem without first trying to solve it yourself will not be beneficial for your learning. TAs will not give the solution for assignments questions before the due date. But they will surely give hints as needed and let you know the correct directions. If you need more clarification, it's always better to contact TAs or me during our office hours. Don't expect TAs will answer all your questions posted in Piazza page with detailed solutions. We (TAs and I) are holding lots of office hours. I highly encourage you to use office hours. Please go to "General Information" then "TA Office Hours" to see when TAs are available during each day from Monday to Friday. If you have any problems or feedback for the developers, email team@piazza.com.

- **Note:** Students that have answered the most statistics-related questions in a way that explains concepts well but does not reveal the answer to an assignment, lab, or webwork question will get a bonus 1% added to their grade. When you answer question, teaching team endorse your answers as "good answer". I add this 1% if you have more than 10 "Endorsed Answers"

- **Access Piazza:** Please go to **"Piazza"** in the left menu in the Canvas course page and it will open in a new window. Then you can sign up for the class page.

WeBWork:

- Please see the WeBWork assignments open and due dates in the Canvas course page.
  Access WeBWork: Please go to **"WebWork"** in the left menu in the Canvas course page.

Labs:

- There are 8 Lab assignments. Please read more information about lab under "Labs" in Canvas course page.

Gradescope:

- Gradescope is an application for grading online, designed for easing the challenges of grading collaboratively with a teaching team**,** particularly on exams. Gradescope supports grading by distributing assessments and assignments to graders, helping them add grades and feedback to student work, returning graded work to students, and providing analytics for teaching teams to review the grading outcomes.
  You need to submit (upload) your answers to assignments in Gradescope. Graded assignments will also be available one week after the due date. I will provide Gradescope link when assignments are posted. You also will receive an email when a Gradescope assignment available. If you have any issue accessing Gradescope, please contact lt.hub@ubc.ca .

- **Access Gradescope:** you can see where to upload your assignment when they are ready. You will be able to access Gradescope only when the first assignment is available there.

Seating in class:

- P**lease sit in a consistent area** of the classroom each day. This will allow for the pedagogical methods planned for this class to help your learning.

Communicable Disease Prevention Framework

Communicable disease prevention outlines how Public Health, UBC and individuals can work together to prevent the spread of communicable disease. It is intended to educate members of the campus community on such measures so that we all better understand the layers of protection.

For more information please visit: https://srs.ubc.ca/health-safety/safety-programs/communicable-disease-prevention-framework/

If you do miss class because of illness or any other reason:

- Make a connection early in the term to another student or a group of students in the class. You can help each other by sharing notes. If you don't yet know anyone in the class, post on the discussion forum (Piazza) to connect with other students.
- Consult the class resources on Canvas.
- Use the online discussion forum (Piazza) for help.
- Come to online office hours (instructor and TAs) to contact us and discuss.

Academic Integrity: Class Policies on Exams and Assignments

Exams:

- Exams are in-person

Assignments/Canvas quizzes/WeBWork/Labs:

- Discussion of ideas leaned in class is encourage (with other students, TAs or the instructor).
  This helps the leaning process. But individual work turned in by each student should be your own work. Do not copy or paraphrase solutions from other students or from other sources. Do Not provide your solutions to another student. Failure to comply with these rules will result in an automatic 0 for your work, and additional academic penalties.

For more information, please see

Academic Honesty and Standards: https://vancouver.calendar.ubc.ca/campus-wide-policies-and-regulations/academic-honesty-and-standards

Academic Integrity: https://academicintegrity.ubc.ca/about-academic-integrity/

Academic Misconduct: https://academicintegrity.ubc.ca/regulation-process/academic-misconduct/

Resources and Support: https://academicintegrity.ubc.ca/resources/

Reach Out for Success

- University students often encounter setbacks from time to time that can impact academic performance. Discuss your situation with your instructor or an academic advisor. Learn about how you can plan for success at: www.students.ubc.ca
- For help addressing mental or physical health concerns, including seeing a UBC counsellor or doctor, visit: https://students.ubc.ca/health-wellness

UBC policies and resources to support student success:

- UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available at https://senate.ubc.ca/policies-resources-support-student-success.

Note:

- Please check the Canvas course page regularly.
- No late submission (WebWork/Written Assignments/Labs/Exams) will be accepted.
- You are allowed to discuss (give hints) WebWork/ Written Assignment questions with other students via Piazza discussion board. But DO NOT post answers in the Piazza page.
- Grades change request forms (for midterm and assignments) should be submitted **within one week after grade released/post solution on canvas page.** Remarking request should only be raised when you are sure that the markers have made a mistake in marking your paper when you compare your paper with marking scheme. Remarking is not meant to give students a way to ask for more marks

- I will not be able to answer your questions about assignment problems/text book problems/ class note examples etc. by emails. I hope you can understand that as there are around 700 students in my classes in this term and how hard to explain answers to your questions through emails. Please use **office hours** and **Piazza Discussions** for those kind of questions**.** Please use the instructor email only for personal matters (eg. if you are going to miss the midterm exam due to some unavoidable circumstance etc. or some other important matter related to the course) that you would want to discuss with the instructor. We are always there to help you during our (TAs and Instructor) office hours.

Land acknowledgement: *We acknowledge that the UBC Vancouver campus is situated within the traditional, ancestral and unceded territory of the xʷməθkʷəy̓əm (Musqueam).*

STAT 251 - Elementary Statistics

Summer Term - 1 (May - June 2025)

Schedule: This is a tentative lecture schedule and may be subject to change. Any updates will be announced in class and/or posted on Canvas page

Week	Dates	Lectures	WeBWork Due Dates	Labs
1	May 12 - May 16	Ch 1, 3		No Labs
2	May 19 - May 23	Ch 3, 4, 5	WW 1 - May 19 WW 2 - May 23	Lab 1 Lab 2
3	May 26 - May 30	Ch 5, 6	WW 3 - May 26 WW 4 – May 30	Lab 3 Lab 4
4	June 2 – June 6	Ch 6, 7 **Written Assignment 1 due on June 1** **Midterm Exam** **Thursday, June 5 6:00pm – 7:10pm at the Regular Lecture Room** Lectures on Midterm Exam Day: from 7:30 pm	WW 5 - June 2	No Labs
5	June 9 - June 13	Ch 7, 8, 10	WW 6 – June 9 WW 7 - June 13	Lab 5 Lab 6
6	June 16 - June 20 **Last Day of STAT 251 class is Thursday, June 19**	Ch 10, 2, 11 **Written Assignment 2 due on June 18**	WW 8 - June 16 WW 9 - June 19 WW 10 - June 20	Lab 7 Lab 8
	June 23 - 27	Final Exam Period		

- Written assignments are published at least 7 days prior to the due date