UNIVERSITY OF WATERLOO | Department of Statistics and Actuarial Science

GRADUATE CONSULTANT POSITION WITH THE STATISTICAL CONSULTING AND SURVEY RESEARCH UNIT (SCSRU)

CREATED BY SAS TA PROGRAM

UPDATED DECEMBER 2025

Introduction to the SCSRU

The SCSRU is a research unit formed in 2023 by joining two former units: the Statistical Consulting and Collaborative Research Unit, and the Survey Research Center. As such, the SCSRU has three main functions:

- Providing comprehensive statistical and survey research support to University of Waterloo researchers, including students and faculty members,
- Offering a full spectrum of survey services to both internal and external clients (including questionnaire design, data collection, etc.),
- Enhancing data literacy across campus to drive higher-quality research.

Statistical Consulting Services

The SCSRU offers two main consulting services: Statistics Help Desk and research collaboration. The Statistics Help Desk is a free service offered to UWaterloo researchers. Researchers can use the SCSRU website to book virtual appointments with the help desk to ask statistics questions about their research and receive advice (e.g., which model to use in their data analysis, how to determine the sample size for their experiment, etc.).

The SCSRU also acts as a research collaborator for research projects. This includes projects from a UWaterloo researcher or from external entities (e.g., other universities, government bodies, companies, etc.). The latter is known as "Enhanced Services", in which case the SCSRU can be a collaborator or act as a consulting firm. As a collaborator on both internal and external projects, the SCSRU provides help with:

- Identifying research questions which can be answered using data,
- Establishing experimental plans,
- Suggesting additional research questions which can be answered by the collected data,
- Performing statistical analysis of the collected data,
- Assisting in presentations of the results, and
- Pursuing further research born from the project.

Statistical Workshops

The SCSRU organizes workshops for the UWaterloo community to raise data literacy. For example, recent events include:

- "R for Beginners: Your Data Adventure Begins": a hands-on session introducing R as a tool for data analysis
- "Explore Your Count Data": a workshop on topics related to the Poisson regression model as a tool to analyze count data.

Resources from selected past events are available on the SCSRU website.

Graduate Consultant Position

Duties

A graduate consultant assists the SCSRU by holding Statistics Help Desk hours and by working as a research collaborator. A fixed number of hours are allocated to the help desk. Each appointment lasts between 30 minutes to 1 hour. Since researchers can provide details on their project and questions when they book the appointment, the time used to prepare for an appointment is also counted towards these hours. As a research collaborator, the graduate consultant performs some or all tasks noted above, depending on the nature of the project. This may present opportunities to be a co-author for publications. A graduate consultant may be asked to create online resources and/or conduct workshops (either in-person or online).

Note that due to project timelines, a graduate consultant may need to prioritize tasks accordingly and work outside of typical hours.

Selection Criteria

Selection criteria are often stated in the job advertisement, which is typically sent to graduate students via email. It is important to note expected and desired criteria:

- Expected
    - Full-time PhD student in the Department of Statistics and Actuarial Science,
    - Excellent communication skills, and
    - Knowledge of linear regression, generalized linear models, and designs of experiments.
- Desired
    - Knowledge of questionnaire design, non-parametric statistics, sample size determination, and longitudinal data analysis, and
    - Knowledge of RMarkdown, SAS, and SPSS.

General Application Process

The vacancies and application process are highly dependent on the projects. If you are interested in an opportunity, you need to discuss it with your supervisor and obtain approval before applying. There is a short interview for shortlisted students.

Frequently Asked Questions

The following questions were answered by three graduate consultants during the information session on November 28, 2025. When responses for a question are similar, they are summarized as a unique answer (e.g., A2 as the unique answer for Q2). If this is not the case, the different responses remain separated (e.g. A1.1 and A1.2 for Q1).

Q1: How did you hear about this position?

A1.1: I heard about this position by the email sent to graduate students about an opening.

A1.2: I heard about this from a friend.

Q2: How often is this position opened?

A2: This depends a lot on the projects at the SCSRU and the number of current graduate consultants. A position may open when the SCSRU needs more graduate consultants for a project or when someone leaves (by graduating, for example)

Q3: How many hours does this job take per term?

A3: This position is counted as a Research Assistant (RA) unit and takes roughly 80 hours per term.

Q4: Can you describe the depth of the questions that researchers ask you?

A4: Questions from the Statistics Help Desk are rather on a surface level. Some of the questions I have been asked are:

- "Which model should be used to analyze this dataset?"
- "How many observations should be collected for this experiment?"
- "Can you help structuring the dataset and the code to analyze it?"

Questions from the research project for which I am a collaborator are much more in-depth.

Q5: What have been your tasks as a collaborator for a research project?

A5: It depends on the nature of the project. I have had one hands-on project where I had to build the code, analyze the data and write a section of the paper. There has also been another one where I only followed the progress of the project and offered advice.

Q6: What has been the most useful statistical knowledge for you as a graduate consultant?

A6: I have seen many research questions which can be analyzed using generalized linear models. Knowledge on experimental design has been very useful as well. Also, some questions require you to brush up on and learn more about a statistical concept you do not frequently use, which means that you have the opportunity to learn on the job.

Q7: What have you learned from this position?

A7.1: Through this position, I have had the chance to practice explaining statistical concepts to people of different backgrounds and knowledge bases. This means that I need to find the gap in their knowledge and fill in this gap in a way that is understandable to them and even matches their interest or their project. This may need to be done during the meeting, so I need to think quickly as well.

A7.2: I have been able to witness the process of collecting data and to see how theoretical concepts I learned in my courses apply in different fields, which may not be within my research interests. Without being a graduate consultant, it may be very hard for me to be in touch with these topics.

Q8: What is the hardest part of being a graduate consultant?

A8.1: When I make a connection with the researcher (for example on LinkedIn), sometimes I need to remind them that I cannot answer their statistics questions outside of the appointment (in private chats, for example). Keeping the boundary may be hard in these cases.

A8.2: Sometimes a researcher comes in with an experiment that has been completed but was not done correctly (e.g., the trials were not randomized in a correct way), and they may not have the time or resources to do it again. Telling them this when the error cannot be fixed can be hard.