Dalhousie University invites applications for a twelve-month limited term instructor position with the Faculty of Science Dalhousie Integrated Science Program (DISP) and Department of Mathematics and Statistics at Dalhousie University, Halifax, Nova Scotia. The position is expected to start on September 1, 2021.

The instructor will teach a total of six courses. The instructor is responsible for all aspects of teaching, grading and administration of each course taught, and will be available for three hours per week outside of class times for student consultation.

Courses to be taught:
• SCIE 1506 and STAT 2450 in the Fall 2021 term,
• STAT 2450 and 3450 in the Winter 2022 term,
• STAT 2450 and 3450 in the Summer 2022 term.

SCIE 1506 is the Introductory Statistics (equivalent to STAT 1060) component of Integrated Science SCIE 1506 and SCIE1507 (see https://www.dal.ca/faculty/science/integrated-science-program.html). Duties for this course include collaborating with Integrated Science Biology, Earth Sciences, Psychology, and Writing in Science professors by helping with the development and delivery of integrated sessions and supporting students with data and statistical analysis aspects of the SCIE 1507 research project component.

Course descriptions are included in the Undergraduate Calendar, published by the Registrar's Office, Dalhousie University. The topics to be covered in the courses are available from the Chair.

Course delivery in fall and winter term is expected to be in-person. If required due to public health measures, course delivery may switch to on-line.

Responsibilities for Integrated Science are:
• Develop and teach an integrated statistics component that links with the other subjects in SCIE 1506/1507 (Biology, Psychology, Earth Sciences Writing in Science) and when possible the co-requisite subjects Chemistry, Math, Physics and Ethics in Science. This curriculum will engage first-year students through hands-on learning of statistics in an interdisciplinary science context. Incorporate student-collected data in class lectures, labs or assignments while working through concepts in introductory statistics. The course will be delivered through a combination of lectures and labs.
• Attend 2-4 Integrated Science field trips (Thursdays or Friday afternoons) and provide feedback and recommendations on data collection for use in teaching statistics and research design. Lecture on all topics at the introductory level for statistics (~20 lectures). Post learning resources for students on Brightspace, e.g., lecture notes and/or recordings, assigned readings and short, online pre-lecture quizzes. Delivery of labs and supervision of lab TA including overseeing lab assignment marking. Instructor is also expected to upload submitted marks to Brightspace and hold weekly office hours.
• Assist with instruction and delivery of data literacy and research skills component. The Writing in Science component includes scientific methodology and data literacy components and students engage in original research projects in Dalhousie University host labs in their winter

term. In addition to the scheduled statistics lectures, the statistics instructor will be responsible for developing and delivering 2 to 4 workshops in collaboration with other Integrated Science professors at mutually agreed times. Example topics include: 1) research design, 2) types of variables, 3) statistical analysis of student-collected data, and 4) visualization of lab or field trip data. In the winter term provide statistical support to the research project component of the class. Meet with students weekly to consult on data components of DISP research projects underway in Dalhousie host labs (~30 projects with 2-4 students each.)
• Coordinate teaching and assessments with other Integrated Science professors. Attend weekly meetings with other Integrated Science professors at a mutually agreed time. Prepare, invigilate and mark midterm and final exam questions that are integrated with other subjects. Attend and provide feedback on mid-term research proposal presentations and the DISP research symposium in April. Provide year-end feedback on and revise the statistics curriculum of SCIE 1506 by April 30, 2022.

Qualifications

Applicants must have
• a M.Sc. degree in Statistics or a related discipline,
• familiarity with and experience teaching university-level courses which cover both supervised and unsupervised learning/machine learning methods (including but not restricted to bagging, boosting, random forests, support vector machine, neural networks) and experience dealing with different types of data in addition to the typical numerical data matrix, such as images, sounds, text and biomarkers,
• experience teaching with R (SCIE 1506, STAT 2450 and STAT 3450 are taught using R), and
• demonstrated evidence of teaching effectiveness.

Experience with online teaching, team teaching, applications of statistics to other disciplines, and experiential learning is desired.

To apply

Applications must include a cover letter, curriculum vitae, teaching statement, teaching dossier, and contact information for three individuals who can provide confidential letters of reference. Reference letters will be solicited by the committee after an initial review of applications. All application materials must be submitted online via PeopleAdmin (https://dal.peopleadmin.ca/postings/6225).

The start date for this position is September 1, 2021. Review of applications will begin June 25, 2021 and continue until the position is filled.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. Dalhousie University is committed to fostering a collegial culture grounded in diversity and inclusiveness. The university encourages applications from Indigenous persons, persons with a disability, racially visible persons, women, persons of a minority sexual orientation and/or gender identity, and all candidates who would contribute to the diversity of our community. For more information, please visit https://www.dal.ca/hiringfordiversity .