## COURSE: BIOL-343 Data Analysis for Biologists

**TERM: Fall 2025**

**Coordinator: R. Colautti**

**SUMMARY**:

Biology 343 focuses on the collection, management, analysis, and publication of biological data using R and R Studio software. Learning occurs primarily through self-guided tutorial chapters, supplemented with weekly quizzes and assignments to reinforce the techniques and concepts covered in the assigned readings. The main responsibility of TAs for this course is to help guide students on their learning journey through weekly help sessions and feedback on assignments. A qualified TA for the course must be comfortable programming in R using the R Studio IDE, and familiar with statistical models and the major packages covered in the course, namely: *dplyr*, *ggplot2, Rmarkdown, lm, glm, lmer,* and *gam*.

The major TA duties include running the weekly help sessions and providing timely feedback on weekly assignments (typically within 5 working days). A majority of time will be spent in weekly helps sessions assisting students in trouble-shooting any problems they might have with statistical analyses and the use of computer hardware and software. TAs will also assist with grading exams.

**DUTIES**:

1. Coordinate weekly help sessions to assist students in real-time with technical problems (e.g. software installation problems, typos, and other coding errors) and coding applications.
2. Provide timely feedback on weekly assignments in a timely manner (typically within 5 working days)
3. Assist with grading other major assignments and exams.
4. Maintain and update the course onQ site as required, including grading items.
5. (Time permitting) an option to gain teaching experience by leading one or more lecture sessions. This is not required for the course but can be requested by the TA.

**EVALUATION**:

The TA will receive a written evaluation provided by the Course Coordinator at the end of the course. This will include results of an informal feedback questionnaire about the TA administered by the Course Coordinator near the end of the course. The questionnaire will evaluate the TA’s preparation/knowledge, helpfulness, and teaching effectiveness.

**PROFESSIONAL CONDUCT**

All Biology TAs are required to adhere to the University's Code of Conduct as described in Section 12 of the Queen's Graduate Calendar, and Section V of the Guide to Graduate Studies in Biology. As teachers of undergraduates, TAs are expected to recognize the seriousness of all forms of Academic Dishonesty, Harassment and Discrimination and to understand the rules governing such cases at Queen's.

**PROCEDURES FOR RESOLVING PROBLEMS BETWEEN TAs and INSTRUCTORS**

If problems arise from the performance of TA duties, the TA and Instructor or Course Coordinator should attempt to resolve these difficulties in a timely fashion, as described in Section IV of the Guide to Graduate Studies in Biology. TAs should be aware that poor performance may lead to the loss of further contracts and guaranteed minimum support. If problems persist, the Undergraduate Coordinator, in consultation with the Graduate Coordinator, will be responsible for resolving the situation.

<http://queensu.ca/facultyrelations/teaching-assistants-and-fellows/collective-agreement>