

BISC-869, Quantitative Methods, Fall, 2024

Time/Location: Thurs, 09:30–11:30, RCB 8104
Thurs, 14:00–16:00, RCB 8104


Instructor: Dr. Leithen M’Gonigle
e-mail: lmgonigl@sfu.ca
Office Location: Shrum Biology B8273
Office Hours: By appointment

Course Website: <https://www.sfu.ca/biology/faculty/M’Gonigle/qm.html>

Grade Breakdown

| | |
|--|-----|
| Assignments | 50% |
| Presenting a talk on a topic/paper | 20% |
| Moderating a discussion on a topic/paper | 20% |
| Participation | 10% |

Tentative Schedule

| Week | Dates | Topic |
|------|--|--|
| 1 | Sept 12 | Introduction / Course overview / Introduction to R |
| | | Workshop: Introduction to R |
| 2 | Sept 19 | Graphics |
| | | Workshop: Displaying data |
| 3 | Sept 26 | Experimental design |
| | | Workshop: Experimental design |
| 4 | Oct 3 | Linear models |
| | | Workshop: Linear models |
| 5 | Oct 10 | Mixed-effects models |
| | | Workshop: Linear mixed-effects models |
| 6 | Oct 17 | Likelihood |
| | | Workshop: Likelihood |
| 7 | Oct 24 | Generalized linear models |
| | | Workshop: Generalized linear models |
| 8 | Oct 31  | Model selection |
| | | Workshop: Model selection |
| 9 | Nov 7 | Bootstrap |
| | | Workshop: Bootstrap |
| 10 | Nov 14 | Bayesian methods |
| | | Workshop: Bayesian methods |
| 11 | Nov 21 | Mark-recapture models |
| | | Workshop: Introduction to JAGS, Mark-recapture |
| 12 | Nov 28 | Occupancy models |
| | | Workshop: Occupancy models in JAGS |