

Bio4241 - Advanced Genetics - Winter 2026

Course Syllabus

Instructor:

Dr. Steve Carr

Office: CSF-4243, Phone: 864-4776

Office hours: Tu Th 1030 – 1200

or by arrangement

email: scarr@mun.ca

Course webpage:

<http://www.mun.ca/biology/scarr/Bio4241.html>

ED- 4034 Tu Th 0900 – 1015 Office hours: Tu Th 1030 – 1200 or by arrangement

Part I: Presentation & Analysis of Classic Genetics Experiments:

Groups will present a classic experiment in genetics, with emphasis on the **methods & experimental data** from original scientific paper.

Presentation 60 mins @ + 15 mins @ for discussion & questions.

I will demonstrate the approach with a lecture on **Luria & Delbruck (1943)**

1. Consult **original** paper (provided as **PDF**).
Include **historical background & scientific significance**.
2. Consult discussion in **Bio2250** textbook or website [[Bio2250 - Principles of Genetics](#)] as necessary
3. Prepare a **web-based lecture** [HTML, PowerPoint, or Prezi]
Present **Methods, Data (Figures & Tables), Results & Conclusions** of paper
Emphasize **logic** of the experiment. Provide a **critical review** of the experiment.
4. Present the paper as a **scientific experiment** on *its own terms*
Provide necessary **technical & mathematical** background

Part II: Presentations of modern papers & book chapters: **TBA**

10% of the mark will be deducted if web materials are not posted **24 hours** before presentation

10A Mon & 10A Wed.

Grading Scheme:

40% Class presentations

15% for Part I

25% for Part II

20% Class participation

Group $n+1$ will lead discussion on **Group n** presentation

16% **Midterm** (Essay-type: Two @ 8%)

24% **Final** (Essay-type: Three @ 8%)

Midterm & Final exams are **essays** from the presentations, assigned as part of the presentations.

For the **midterm** exam, I will select *three* of these questions at random:

you will write 1 ½ ~ 2 pages essays on any *two* of these of your choice.

For the **final**, you will write *three* essays from among *four* possibilities.

The essays will be prepared ahead of time, and that the quality of the presentation will reflect this.