

Genetics and Genomics Colloquium
Fall and Spring Semesters
GMS GE 703 and 704

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The Genetics and Genomics Colloquium will be a highly participatory journal club where the students will be asked to give presentations on cutting edge research with the focus on communication skills rather than scientific content. Second year students will prepare presentations for the journal club on a rotating basis. The journal club will meet for one hour weekly with students giving 2 presentations per semester. In addition to attending the journal club itself, students will also spend on average a second hour weekly attending practice sessions of their classmates or their own practice sessions with faculty or students. The journal club will run for the duration of both fall and spring semesters for 15 weeks per semester. The slots not filled with student presentations will be utilized for general methods meetings to discuss different public speaking techniques as well as for sample presentations given by faculty in the Department. The journal club may be attended by any interested members of the scientific community at Boston University.

The presentations should include background information to frame the context of the paper chosen for discussion, a description of the scientific aims and experimental methods of the authors, and a critical evaluation of the significance of the work. The paper chosen should be a relatively recent paper that has broad interest to the Genetics and Genomics community. In describing the scientific aims of the paper, the student should clearly portray the model that the authors set out to test and, in doing so, precisely state the hypothesis tested. This exercise will help the students not only to appreciate the context of the work being discussed, but will help them refine their own skills in experimental design as well. The discussion need not address each individual experiment in the publication; rather the presentation should focus on the key points of the paper and the experiments that led to these conclusions. The seminar should conclude with comments about the strengths and weaknesses of the experimental approaches employed by the authors as well as some suggestions for future studies in the field. Finally, the student will be available to answer questions from the general audience.

The talks will be rehearsed with the input of both faculty and student coaches to help the presenters develop skills in effective public speaking. These coaches will offer suggestions to improve content, organization, and clarity. In order to develop these skills, we will ask the students to participate in “best practices” meetings that will commence the fall semester course and then to apply this information to their initial presentations given in an informal style (i.e. without Powerpoint). This approach is designed to force the students to distill the ideas from the paper into simple concepts that can be sketched as cartoons representing the essence of the models tested and experimental outcomes. As the students master these skills, the presentations will shift to a more polished format involving computer-based presentation media.

Key components of Genetics and Genomics Colloquium:

- Weekly meetings of one hour per session will run the duration of the fall and spring semesters in 15 week blocks.
- Introductory sessions on “best practices” will be held to familiarize students with techniques of effective speaking.
- Subsequent sessions will feature one student presenting a paper of their choice each week. Certain intervening meetings will feature example presentations given by faculty members.
- Every student will be responsible for two presentations per semester.
- Each presentation must be rehearsed in advance with faculty coaches and student coaches of their choosing. Students will also serve on coaching panels for their classmates.
- Initial presentations will be made with minimal audio-visual equipment to encourage students to develop the skill of clearly presenting the context of the work, the model tested, the experimental approach, and strengths and weaknesses of this approach. By limiting audio-visual distractions, the students will be focusing on distilling the information to its most essential components and conveying these concepts lucidly.
- Successive meetings will move to a more polished format, where the students take the principles they mastered previously in effective communication of scientific concepts and apply them to current computerized presentation methods.

This approach will allow students to become more comfortable with public speaking while developing the skills necessary for cogent communication of scientific ideas. We consider this goal to be one of the most important abilities for a scientist to develop because it facilitates the exchange of ideas which is the cornerstone of scientific inquiry.