



Chair, Arts and Sciences Curriculum Committee

January 16, 2024

Dear Chair and Members of the Arts and Sciences Curriculum Committee:

On October 26, 2023, the Natural and Mathematical Sciences Subcommittee reviewed three related requests from the Department of Statistics to revise 1) the Statistics PhD program, 2) the Biostatistics PhD program, and 3) the Statistics MS program. For the Statistics PhD program, proposed changes are 1) the introduction of new coursework, including a new mathematics foundations sequence, and revision of existing coursework for all three programs. 2) the introduction of standard and accelerated tracks, as well as personalized pathways, in the Statistics PhD program, with the accelerated track allowing students to immediately begin second-year coursework, 3) the introduction of a mandatory placement exam to identify students who would benefit from the new mathematical foundations sequence, and 4) providing the option of taking a Master's-level exam at the start of the Statistics PhD program, success at which allows entry to the accelerated track. The department's rationale for these changes reflects the diversity of student background and preparation upon entering the programs. Some students have taken Master's-level coursework and may find first-year coursework to be repetitive, while other students may lack some of the necessary mathematical background.

Proposed changes to the Biostatistics PhD are 1) the introduction of new coursework in the first year and 2) changes to course requirements so that there is a single set of curriculum requirements for this interdisciplinary program. These department's rationale for the proposed changes is to unify the curriculum for this interdisciplinary program and to allow additional flexibility. Proposed changes to the Statistics MS are the introduction of new coursework in the first year. Changes to coursework in all three programs reflect the intertwined nature of these programs, as coursework in the first two years largely overlaps among programs. Therefore, changes to the required coursework for the Statistics PhD necessitate changes to required coursework in the Statistics MS and Biostatistics PhD programs.

The NMS Subcommittee voted to approve the proposed changes to the Statistics PhD with two contingencies and three recommendations and voted to approve the proposed changes to the Biostatistics PhD with one contingency. Revised submissions addressing these contingencies and recommendation wer reviewed and approved by Ian Hamilton, Chair of the Natural and Mathematical Sciences Subcommittee, on January 11, 2024. These proposal are now advanced to the ASCC with a motion to approve.

The NMS Subcommittee requested additional information on the proposed Statistics MS, which was received on November 29, 2023. The NMS Subcommittee voted to approve the proposed changes to the Statistics MS on December 7, 2024. This proposal is likewise now advanced to the ASCC with a motion to approve.

Sincerely,

A handwritten signature in black ink, appearing to read 'I. Hamilton', with a stylized flourish at the end.

Ian Hamilton
Professor
Department of Evolution, Ecology, and Organismal Biology
Department of Mathematics
Chair, ASCC Natural and Mathematical Sciences Subcommittee