Request for New of Changed Course Designator:

We request the addition of a new course designator, BDS (Biological Data Sciences) for the Bachelor of Science in Biological Data Sciences.

Purpose: *The proposed course designator should have an identified purpose within the curricular structure of Oregon State University.*

• *What academic programs, including majors, certificates, options and minors will be served by courses within the proposed new course designator?*

The BDS course designator will be used by only the Biological Data Sciences program.

• *In what ways will the content within the scope of the course designator constitute a coherent body of knowledge?*

Biological Data Sciences will be a new transdisciplinary program that integrates biological and quantitative (computer science, statistics, mathematics) sciences. Courses unique to the proposed BDS designator are vertically aligned and designed around a common framework. The shared structure is designed to address the specific needs of this program in teaching students how to integrate skills and knowledge across what were once traditionally disparate fields of study. Specifically, the needs are to teach students how to: 1) work effectively in teams to address common goals, 2) communicate effectively across disciplines, and 3) appropriately apply methods/fundamental knowledge inherent in one discipline such as computer science, to analyzing biological data.

Many of the courses foundational to the Biological Data Sciences program will be drawn from programs such as those in the life sciences, computer science, earth sciences, statistics, mathematics, and chemistry, for example.

The BDS designator is therefore essential for discriminating courses designed to teach trans-disciplinary skills/knowledge from those that are more traditional and affiliated with already established programs.

• *Is the proposed usage of the course designator consistent with practices at OSU and other institutions? Give examples.*

The proposed usage is consistent with practices at OSU.

Beyond this institution, there are very few examples to draw from, as OSU will be one of the few institutions to offer an undergraduate degree in biological data sciences. Moreover, this program is unique in developing courses with the specific goal of helping students learn skills necessary for this field of study. For a general “Data Science major”, Berkeley, uses “Data” as a designator for its new courses in the program. University of San Francisco offers BSDS 100 (Introduction to Data Science with R). Similarly, at Tufts, the program is referred to as BSDS (Bachelor of Science in Data Science) but there does not appear to be a new designator. Coursework at Temple and University of Georgia, in

contrast, leverage currently existing courses and do not offer new courses to help students integrate across the disciplines. Hence, we are not aware of any new designator for these Data Science programs.

Accountability: *Responsibility for the integrity and oversight of the proposed course designator should be clearly identified.*

• *What will be the academic home of the proposed course designator (College, School, Department, or Program)?*

OSU, Corvallis; College of Agricultural Sciences, Department of Botany and Plant Pathology

• *Who will be responsible for administering the courses with the new designator, e.g. scheduling and catalog updates? Who will be the faculty contacts?*

Director of the Biological Data Sciences program, currently Jeff Chang

• *Who will be responsible for consistency and outcome assessment for courses with the new course designator?*

Director of the Biological Data Sciences program, currently Jeff Chang

• *Which units will receive credit for the Student Credit Hours generated by courses with the new subject code?*

Student Credit Hours will be given to the tenure home of the faculty/instructor delivering the course

• *Who will be responsible for communicating information about the new course designator to students, advisors, Admissions, and other stakeholders?*

Director of the Biological Data Sciences program, currently Jeff Chang, as well as advisors and faculty in the Department of Botany and Plant Pathology.

Impacts: *Who will benefit from the new course designator, and what changes will result from its implementation?*

• *How will the new course designator benefit students?*

The new course designator provides students an identifier to a new program, thereby setting the new program apart from extant programs and “advertising” the new courses. Moreover, the new course designator will be associated with courses that are

novel in teaching skills important for collaborating across disciplines. On transcripts, this provides students a designator to help distinguish their program from others.

• *Will courses with the new course designator duplicate or compete with existing course designators?*

No.

• *Will there be expected cross-listings or curricular equivalencies?*

No.

• *How is the new course designator expected to affect transfer credits?*

We are currently working with several community colleges to develop the same introductory course, so transfer can be as seamless as possible. It is also possible for students to co-enroll in courses such as BDS 211 and BDS 311. For upper division, we will strongly encourage students to complete the courses.

• *Will any existing course designators expire when the new course designator is implemented, and who is impacted by that?*

No.