Biomedical Informatics and Data Science Certificate (BIDS-CERT)

The proposed fully online Graduate Certificate Program in Biomedical Informatics & Data Science is an area of signature UD strength that will be of interest to mid-career working professionals regionally, nationally, and globally. The online program will further develop our Bioinformatics Data Science Core Curriculum, building on the success of the Bioinformatics Master’s programs (MS in Bioinformatics and Computational Biology, PSM in Bioinformatics, and Graduate Certificate in Bioinformatics) established in 2010 and PhD program in Bioinformatics & Systems Biology in 2012 and renamed in 2019 to Bioinformatics Data Science—a cross-campus interdisciplinary graduate program with a current enrollment of about 60 students.

*Biomedical Informatics and Data Science* is an emerging and rapidly expanding field where biomedical research is used to compute, analyze, and interpret large scale data sets to have a substantial impact on improving human health. Biomedical Informatics and Data Science are fields of study with applications ranging from genomics to pharmaceutical, health informatics, and biomedical research; having the potential to impact all areas of scientific research. The curriculum is ideally suited for working professionals or as a complement to other UD degree programs (as students in the Certificate program may be enrolled in other UD graduate programs across colleges), allowing students to gain data science knowledge and skills.

A fully online Graduate Certificate Program in Biomedical Informatics and Data Science will allow us to better serve the needs of working professionals, addressing the main barrier in their ability to attend classes during normal working hours, while increasing enrollment to these these classes and to our program.

Curriculum:

BINF601: Introduction to Data Science (3)\*

BINF610: Applied Machine Learning (3)\*

BINF611: Introduction to Data Science with Online Competitions (1)\*

BINF620: Big Data Analytics in Biomedicine and Health (3)\*

*\*Permanent course proposal in progress*

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