

Certificate in Biomedical Data Science and AI

The Graduate Certificate in Biomedical Data Science and AI is designed for professionals who want to build technical fluency in health-related data analysis, artificial intelligence, and biomedical informatics.

Whether the student is a researcher, analyst, clinician, or industry professional, this flexible, part-time program will expand their impact in data-driven healthcare without the need to commit to a full degree.

The Certificate in Biomedical Data Science and AI requires 18 credit units and begins in the fall semester. Students will complete six core courses and three specialization courses in their area of interest.

Core Courses (9 credit units)

Code	Title	Units
BDSAI 5001	R for Biomedical Sciences	1
BDSAI 5002	Python for Biomedical Sciences	1
BDSAI 5003	Introduction to Biomedical Data Science	2
BDSAI 5004	Introduction to Biomedical Informatics	2
BDSAI 5005	Fundamentals of Biostatistics	2
BDSAI 5301	Seminar Series for Biomedical Sciences	1
or BDSAI 5302	Journal Club for Biomedical Sciences	

Concentration Courses (9 credit units)

Students choose between courses in the lists below and 3 credit units of electives.

Biostatistics

Code	Title	Units
BDSAI 5131	Survival Analysis	3
BDSAI 5132	Statistical Analysis of Longitudinal Data	3
BDSAI 5213	Causal Artificial Intelligence for Healthcare	3

Biomedical Informatics

Code	Title	Units
BDSAI 5121	Electronic Health Records: Foundations	3
BDSAI 5122	Electronic Health Record Analytics	3
BDSAI 5123	Advanced Multi-Omic Modeling and Systems Analysis	3

Data Science

Code	Title	Units
BDSAI 5111	Data Visualization	3
BDSAI 5112	Advanced AI Topics in Biomedical Informatics: Deep Learning, Transformers, and Large Language Models	3
BDSAI 5212	Biomedical Data Mining	3

Academic Policies

Academic policies for I²DB degree programs can be found in the Student Handbook.

Prospective Students

Those interested in applying or who would like more information may contact the program recruiter (i2db-education@wustl.edu).

Website: <https://i2db.wustl.edu/>