

Doctor of Philosophy in Computational Biology

Computational Biology Graduate Program

Computational biology is an interdisciplinary science at the interface of biology, chemistry, medicine, mathematics, and computer science. Its goal is development and application of computational approaches to studies of life processes and improvement of human health. The Computational Biology Graduate Program recruits students with bachelor's or master's degrees who made a choice to pursue a career in computational biology. The Ph.D. degree in Computational Biology requires successful completion of formal courses and demonstration of accomplishments in basic research, qualifying examinations, scientific writing, and formal presentations of research data.

Admission to Graduate Studies

An applicant seeking to pursue graduate study in the College may be admitted as either a degree-seeking or non-degree seeking student. Policies and procedures of Graduate Studies govern the process of Graduate admission. These may be found in the Graduate Studies (<https://catalog.ku.edu/graduate-studies/>) section of the online catalog.

Please consult the Departments & Programs (<https://catalog.ku.edu/liberal-arts-sciences/>) section of the online catalog for information regarding program-specific admissions criteria and requirements. Special admissions requirements pertain to Interdisciplinary Studies degrees, which may be found in the Graduate Studies section of the online catalog.

Ph.D. Admission

Admission Requirements

Applicants must have a bachelor's or master's degree in natural sciences, mathematics, engineering, or another relevant field. Applications are accepted online (<https://gradapply.ku.edu/apply/>).

Non-Degree Seeking Admission

Students who are interested in enrolling in graduate level coursework in the Department of Computational Biology without formal admission to a graduate program at KU are encouraged to apply for graduate non-degree seeking student status. See the department's admission webpage (<http://compbio.ku.edu/apply-0/>) for further details.

Ph.D. Degree Requirements

Students must earn credit in each of the following courses or their equivalents:

Code	Title	Hours
BINF 701	Computational Biology I	5
BINF 702	Computational Biology II	5
BINF 704	Advanced Computational Biology	5
BINF 709	Topics in: _____	1-3
BIOL 636	Biochemistry I	4
BIOL 638	Biochemistry II	4
Elective courses in biology/chemistry		6
Elective courses in analysis/mathematics/statistics		6

By the end of the second year, the student should have completed the formal course work to fulfill requirements for the degree. The student completes and submits a research proposal for the comprehensive oral examination. The proposal must develop a research topic related to the general areas of computational biology. The topic of the research proposal is decided upon by the student in consultation with the thesis advisor. Upon completion of the comprehensive oral examination, the student aggressively carries out research in the laboratory of the thesis advisor. In addition, the student continues attending the weekly Computational Biology seminar series and participating in the Computational Biology student seminar series. A Ph.D. degree is awarded once the student has written a final dissertation and carried out a successful defense of it before a committee.

The research skills training and responsible scholarship requirements are met through BINF 701/BINF 702 coursework, as well as through collaborations in the Center for Computational Biology, student research presentations and individual mentorship.