

# PhD in Translational Biosciences with Emphasis in Cancer Biology

INFOINST 8310	Computational Genomics	3
INFOINST 8350	Integrative Methods in Bioinformatics	3
INFOINST 8450	Precision Medicine Informatics	3
PTH_AS 8090	Advanced Pathology	1-99
STAT 8410	Statistical Theory of Bioinformatics	3
P_HLTH 8420	Principles of Epidemiology	3

## Degree Requirements

All PhD graduate students in the Translational Biosciences program will complete a total of 72 credit hours, including formal coursework and research credit hours. A minimum of 15 credit hours of formal coursework at the 8000 or 9000 level is required. Graduate students must maintain a GPA of 3.0 in their formal coursework. Research credit hours will be graded on a S/U basis.

Graduate students in the Cancer Biology emphasis area will be required to successfully complete at least one of the following Cancer related courses:

BIO_SC 8460	Advanced Cancer Biology	3
V_M_S 8419	Advanced Topics in Cancer Biology and Clinical Oncology	2

Advanced Cancer Genetics\*

Advanced Cancer Immunology\*

Elective courses: It is expected that students will choose courses that will complement their individualized research projects. Below is a list of acceptable courses but other courses may count toward the degree with approval from their committee.

AN_SCI 8430	Introduction to Bioinformatics Programming	4
AN_SCI 8415	Survey of Epigenetics	3
BIOCHM 8432	Enzymology and Metabolic Regulation	3
BIOCHM 8434	Signaling in Molecular Cell Biology	3
BIOL_EN 8000	Scientific Discovery Leading to Life Science Innovations	3
BIOL_EN 8100	Design and Development of Biomedical Innovations	3
BIOL_EN 8280	Advanced Biological Transport Processes	3
BIOL_EN 8470	Ultrasensitive Biodetection	3
BIOL_EN 8570	Microscopic Imaging	3
BIOL_EN 8870	Molecular and Cell Mechanics	3
BIO_SC 8320	Developmental Genetics	3
CHEM 8280	Bioanalytical Chemistry	3
CHEM 8630	Radiopharmaceutical Chemistry	3
CHEM 8640	Biological Radiochemistry	3
LAB_AN 9437	Pathology of Laboratory Animals	4
LAB_AN 9468	Laboratory Animal Biology	4
MPP 8411	Mammalian Pharmacology and Physiology	5
MPP 9426	Transmembrane Signaling	4
MICROB 9407	Advanced Immunology	4
INFOINST 8005	Applications of Bioinformatics Tools in Biological Research	3
INFOINST 8150	Integrative Methods in Bioinformatics	3
INFOINST 8190	Computational Systems Biology	3
or INFOINST 8390	Computational Systems Biology	