

# INTERDISCIPLINARY CANCER SCIENCES (PH.D.)

**Offered by:** Interdepartmental Studies (Faculty of Medicine and Health Sciences)

**Degree:** Doctor of Philosophy

## Program Description

The Ph.D. in Interdisciplinary Cancer Sciences focuses on cancer as a disease and the breadth of cancer research across disciplines. This program includes a solid foundation in fundamental aspects of cancer biology, “omics” analyses, treatments, and patient care.

## Required Courses (4 credits)

Expand allContract all

Course	Title	Credits
CANC 621D1	Seminars in Cancer Sciences.	2
CANC 621D2	Seminars in Cancer Sciences.	2
CANC 701	Ph.D. Comprehensive Examination.	0

## Complementary Courses (10 credits)

6 credits from the following:

Expand allContract all

Course	Title	Credits
EXMD 635D1	Experimental/Clinical Oncology. <sup>1</sup>	3
EXMD 635D2	Experimental/Clinical Oncology. <sup>1</sup>	3
ONCO 610D1	Fundamentals of Oncology and Cancer Research.	3
ONCO 610D2	Fundamentals of Oncology and Cancer Research.	3

<sup>1</sup> Choose either EXMD 635D1/D2 or ONCO 610D1/D2.

4 credits from the following:

Expand allContract all

Course	Title	Credits
BIOC 600	Advanced Strategies in Genetics and Genomics.	3
BIOC 603	Genomics and Gene Expression.	3
BIOC 605	Protein Biology and Proteomics.	3
BMDE 507	Formulation and Delivery of Biotherapeutics.	3
BMDE 653	Patents in Biomedical Engineering.	3
BMDE 655	Biomedical Clinical Trials - Medical Devices.	3
CANC 601	Patient Engagement in Cancer Research.	1
CANC 602	Epidemiology in Cancer .	1
CANC 603	Mouse Models in Cancer .	1
CANC 604	Cancer Genomics Data Analyses .	1

CANC 605	Cancer Caregiving: Psychosocial Issues.	1
CANC 606	Tumour Microenvironment.	1
CANC 607	Cancer Immunotherapies.	1
CANC 608	Oncometabolism .	1
EPIB 507	Biostats for Health Sciences.	3
EPIB 521	Regression Analysis for Health Sciences.	3
EPIB 635	Clinical Trials.	3
EPIB 671	Cancer Epidemiology and Prevention.	3
EXMD 504	Biology of Cancer.	3
EXMD 602	Techniques in Molecular Genetics.	3
EXMD 607	Molecular Control of Cell Growth.	3
EXMD 608	Molecular Embryology.	3
EXMD 614	Environmental Carcinogenesis.	3
EXMD 617	Workshop in Clinical Trials 1.	1
EXMD 618	Workshop in Clinical Trials 2.	1
EXMD 619	Workshop in Clinical Trials 3.	1
EXMD 647	Epigenetics and Cancer.	3
EXSU 500	Artificial Intelligence in Medicine .	3
EXSU 606	Statistics for Surgical Research.	3
HGEN 676	Lab Course in Genomics.	3
HGEN 677	Statistical Concepts in Genetic and Genomic Analysis.	3
HGEN 679	Cancer Genetics: Precision Oncology.	3
HGEN 693	Using Bioinformatics Resources.	3
NUR2 515	Applied Statistics for Nursing.	3
NUR2 783	Psychosocial Oncology Research.	3
ONCO 611	Proteomics for Precision Medicine.	3
ONCO 615	Principles and Practice of Clinical Trials.	3
ONCO 620	Best Practices in Biomedical Research.	3
ONCO 625	Quality Improvement Principles and Methods.	3
ONCO 635	Qualitative and Psychosocial Health Research.	3
ONCO 645	Seminars in Global Oncology.	3
PATH 652	Molecular Biology of Disease.	3
PHAR 508	Drug Discovery and Development 3.	3
PHGY 513	Translational Immunology.	3
POTH 637	Cancer Rehabilitation.	3