Course Requirements

*Degree of MSc:*
Course requirements are recommended by the supervisor and supervisory committee based on the background of the student and the area of research to be undertaken. A minimum of *9 in graded graduate-level courses chosen from the approved course listing, or approved equivalent is required. Students are required to enroll in a lecture-based background course and a seminar style course – normally these are ONCOL 520 or ONCOL 524 and ONCOL 661/ONCOL 660 respectively, but in exceptional circumstances, ONCOL 320, ONCOL 425 or some other seminar course, may be substituted, with the approval of the Associate Chair, Graduate Studies. Students are also required to attend ONCOL 661/ONCOL 660 seminars during all years of their program.

*Degree of PhD:*
For Students entering the PhD program after a BSc degree, the minimum course requirement is *12 in graded graduate-level courses chosen from the approved course listing, or approved equivalent. For students entering the PhD program after an MSc degree, in the same discipline the minimum course requirement is *6 in graded graduate-level courses chosen from the approved course listing, or approved equivalent. As with the Master’s program, students are required to enroll in a lecture based course and a seminar course – normally ONCOL 520 or ONCOL 524 and ONCOL 660/ONCOL 661, in the second year. Students are also required to attend ONCOL 661/ONCOL 660 during all years of their program and to give at least three seminars (usually one per year) through ONCOL 660.

*Approved Courses*
ANAT 603 Medical Histology *3 (fi 6) (spring term/summer, 0-3s-1).
ANAT 604 Medical Embryology *3 (fi 6) (fall term, 3-0-1).
ANAT 606 Selected Topics in Advanced Human Anatomy *3 (fi 6) (either term, 0-0-3).
BIOCH 510 Signal Transduction and Metabolic Regulation *3 (fi 6) (second term, 3-0-0).
BIOCH 520 Protein Chemistry, Structure and Function *3 (fi 6) (second term, 3-0-0).
BIOCH 530 Biochemistry of Eukaryotic Gene Expression *3 (fi 6) (first term, 3-0-0).
BIOCH 541 Structure and Function of Biological Membranes *3 (fi 6) (first term, 3-0-0).
BIOCH 550 The Molecular Biology of Mammalian Viruses *3 (fi 6) (first term, 3-0-0).
BIOCH 555 Biochemistry of Lipids and Lipoproteins *3 (fi 6) (first term, 3-0-0).
BIOCH 655 Advances in Lipid and Lipoprotein Research *3 (fi 6) (second term, 1-2s-0).
BIOCH 675 Magnetic Resonance in Biology and Medicine II *3 (fi 6) (second term, 3-0-0).
BME 513 Imaging Methods in Medicine *3 (fi 6) (second term, 3-0-0).
BME 530 Topics in Biomedical Engineering *3 (fi 6) (either term, 3-0-0).
BME 553 Rehabilitation Engineering: Assisted Movement After Injury *3 (fi 6) (second term, 3-0-3/2).
BME 564 Fundamentals of Magnetic Resonance Imaging, MRI *3 (fi 6) (second term, 3-0-0).
CELL 502 The Birth and Death of a Cell *3 (fi 6) (second term, 3-0-0).
DENT 532 Growth and Development *2 (fi 4) (second term, 2-0-0)
DENT 551 Introduction to Applied Statistics *3 (fi 6) (either term, 39 hours)
GENET 500 Advanced Genetic Analysis I: The Genetic System *3 (fi 6) (first term, 3-3s-0).
GENET 508 Graduate Course in Replication, Repair and Recombination *3 (fi 6) (first term, 3-1s-0).
GENET 510 Advanced Topics in Gene Regulation, Development and Medical Genetics *3 (fi 6) (second term, 3-3s-0).
GENET 512 Graduate Course in Genetic Control of Development *3 (fi 6) (first term, 3-1s-0).
GENET 518 Graduate Course in Human Genetics *3 (fi 6) (second term, 3-1s-0).
INT D 525 - Commensal Bacteria and Gastrointestinal Health *3 (fi 6) (second term, 3-0-0)
INT D 570 Healthcare Ethics *3 (fi 6) (either term, 0-3s-0).
LABMP 500 Introduction to Human Disease *3 (fi 6) (either term, 3-0-0).
LABMP 510 Cryobiology I *3 (fi 6) (first term, 2-1s-0).
LABMP 511 Cryobiology II *3 (fi 6) (second term, 2-1s-0).
MDGEN 601 Selected Topics in Medical Genetics *3 (fi 6) (second term, 0-3s-0).
MED 536 – Inflammation *3 (fi 6) (first term, 3-0-0).
MED 650 – Fundamentals for Clinical Investigators *3 (fi 6) (two term, 3/2-0-0).
MMI 505 - Advanced Microbial Pathogenicity *3 (fi 6) (first term, 3-0-0).
MMI 510 - Informatics for Molecular Biologists *3 (fi 6) (second term, 3-0-1).
MMI 515 - Advanced Viral Pathogenesis *3 (fi 6) (second term, 3-0-0).
MMI 552 - Advanced Immunology *3 (fi 6) (second term, 3-1s-0).
MMI 605 - Current Topics in Infection and Immunity *3 (fi 6) (fall, 0-4s-0).
ONCOL 475/575 Fundamentals of Radiopharmaceutical Sciences *3 (fi 6) (either term or Spring/Summer, 0-0-3).
ONCOL 520 Tumor Biology *3 (fi 6) (second term, 3-0-0).
ONCOL 524 Nutrition and Metabolism Related to Cancer *3 (fi 6) (first term, 3-0-0).
ONCOL 570 Directed Reading in Experimental Oncology *3 (fi 6) (either term, 0-3s-0).
ONCOL 580 Molecular Imaging: Tracers, Targets, Techniques *3 (fi 6) (either term, 3-0-0).
ONCOL 620 Recent Advances in Cancer Research *3 (fi 6) (two term, 0-3s-0).
ONCOL 660 Current Topics in Cancer Research *2 (fi 4) (second term, 0-1.5s-0).
ONCOL 661 Current Topics in Cancer Research II *1 (fi 2) (first term, 0-1s-0).
OPHTH 601 Ocular Genetics *3 (fi 6) (either term, 3-0-0).
PHARM 630 The Metabolism and Excretion of Drugs *3 (fi 6) (either term, 3-0-0).
PHYSL 501 Topics in Cardiovascular Physiology *3 (fi 6) (second term, 3-0-0).
PHYSL 513 Fetal Physiology *3 (fi 6) (second term, 3-0-0).
PHYSL 545 Physiology of Transport Systems *3 (fi 6) (second term, 3-1s-0).
PMCOL 508 Molecular Pharmacology *3 (fi 6) (either term, 3-0-0).
PMCOL 512 Pharmacology of the Synapse *3 (fi 6) (either term, 3-0-0).
PMCOL 514 Biophysical Aspects of Ion Channel Pharmacology *3 (fi 6) (either term, 3-0-0).
PMCOL 515 Advanced Topics in Cardiovascular Pharmacology *3 (fi 6) (either term, 3-0-0).
RADDI 511 Physics of Diagnostic Imaging: Fundamentals *3 (fi 6) (two term, 2-0-1).
RADDI 512 Physics of Diagnostic Imaging: Imaging Modalities *3 (fi 6) (two term, 2-0-0).
RADDI 600 Special Topics in Radiology Research *2 (fi 4) (second term, 2-0s-0).
SPH 519 – Biostatistics I *3 (fi 6) (either term, 3-0-1).
SPH 531 – Statistical Methods in Health Research *3 (fi 6) (either term, 3-0-1).

University of Alberta Calendar