

Faculty of Medicine and Dentistry

The Faculty of Medicine and Dentistry 368

Faculty Vision 368
 Faculty Mission Statement 368
 Faculty Educational Mandate 368
 Strategic Initiatives 368
 Values 368
 Faculty Overview 368

The Professors 369

Teaching and Scholarship 369
 Members of the Faculty 369
 Faculty Departments 369
 Faculty Divisions 378
 Additional Members of Faculty Council 379

General Information 380

Universal Precautions 380
 Medical Programs 380
 Dental and Dental Hygiene Programs 380
 Department of Dentistry Objectives 380
 Affiliated Hospitals and Institutions 380
 Registration and Licensing 381
 Finance 381
 DDS Degree 381
 Dental Hygiene Diploma 381
 Bachelor of Science (Dental Hygiene Specialization) 381
 Professional Standards for Students in the Faculty of Medicine and Dentistry 382
 Bachelor of Science (Dental Hygiene Specialization) Post Diploma Degree Completion Program 382
 MD Degree 382
 BSc in Radiation Therapy 382
 Medical and Dental Society Memberships 382

Admission and Academic Regulations 382

Admission 382
 Combined Program for the Degrees of MD and PhD 382
 Combined Program for the Degrees of MD/MBA 383
 Academic Standing and Graduation 383
 MD Program 385
 BSc Program in Medical Laboratory Science 386
 BSc Program in Radiation Therapy 387
 Appeals and Grievances 388

Programs of Study 389

Protection for Persons in Care 389
 MD with Special Training in Research 389
 Honors in Research Program in Medical Laboratory Science 389
 Graduate Studies 389
 Continuous Professional Learning 389
 Continuing Dentistry Education 389
 Postgraduate Medical Education 389
 Postgraduate Dental Education 390
 Combined Program for the Degrees of MD and PhD 390

Courses 390

DDS Advanced Placement Program 391

DDS Degree 391

Degree of Bachelor of Medical Science 391

Degree of BSc in Medical Laboratory Science 392

Degree of BSc in Radiation Therapy 392

Dental Hygiene Diploma/Bachelor of Science (Dental Hygiene Specialization) 393

MD Degree 394

Certificate in Biomedical Research 394

Post-Professional Certificate BSc in Medical Laboratory Science 395

The Faculty of Medicine and Dentistry

Faculty Vision

To build an exceptional socially accountable Faculty through leadership in education, research and patient care and to be recognized as graduating highly skilled doctors for Canada.

Faculty Mission Statement

The Faculty of Medicine and Dentistry serves the public good through excellence in medical and health professions education, research and patient care. We build partnerships essential to a high-performing academic health sciences centre.

Faculty Educational Mandate

The University of Alberta Faculty of Medicine and Dentistry is dedicated to excellence in professional health care education, graduating competent generalist physicians and health care professionals responsive to the health care needs of our communities.

Undergraduate Medical Education: www.med.ualberta.ca/programs/MD

Undergraduate Dental/Dental Hygiene Education: www.dent.ualberta.ca

Undergraduate Medical Laboratory Science Education: www.med.ualberta.ca/programs/MLS

Undergraduate Radiation Therapy Education: www.med.ualberta.ca/programs/radth

Strategic Initiatives

The Faculty has defined three strategic priorities that will enable it to serve the public good:

1. Engage Communities
1. Define Excellence
2. Organize for Excellence

Values

2. **Scholarship:** To discover, interpret and disseminate new knowledge that promotes and restores health.
1. **Respect, Compassion and Caring:** To use these ideals to guide how we teach our students, care for our patients and work with our colleagues.
2. **Integrity:** To carry out our responsibilities to our patients, our students and our colleagues, maintaining the highest moral standards.
3. **Social Accountability:** To Engage all levels of the broad community in order to address their priority health concerns.
4. **Excellence:** To be dedicated to the highest standard of conduct in teaching, research and patient care
5. **Partnership:** To partner in education, research and health care for the greater good of the communities we serve.

Faculty Overview

In striving to realize its vision and to fulfill its mission, the Faculty contributes to the academic environment of the University of Alberta, City of Edmonton, and Province of Alberta. The interdependence of teaching, research, and delivery of health care not only necessitates the scholastic endeavours described herein, but also generates a major economic impact on the communities encompassed. A few facts:

Number of Departments	20
Number of Faculty Divisions	2
Number of Faculty (includes 42 FSO's)	783
Number of Administrative Professional Officers	27
Number of other (Academic Staff)	419
Number of Clinical Academic Colleagues	2063
Number of Support Staff	1438

Numbers of Students and Residents	
Medical Students	663
Medical Residents and Fellows	927
Dental Students	145
Dental Residents	4
Dental Hygiene Students	140
Medical Laboratory Science Students	85
Radiation Therapy Students	5
Graduate Students	586

In subsequent sections of this document, the departments, divisions and members of staff are listed along with summaries of the various programs offered. The Faculty warmly welcomes feedback and questions and can be contacted as follows:

Faculty of Medicine and Dentistry
2J2.00 WC Mackenzie Health Sciences Centre
University of Alberta
Edmonton, Alberta, Canada T6G 2R7
(780) 492-6621; FAX (780) 492-7303
www.med.ualberta.ca

The Professors

Teaching and Scholarship

The Faculty of Medicine and Dentistry offers a number of outstanding educational programs including the Medical Degree, the Doctor of Dental Surgery, Dental Hygiene, Medical Laboratory Science and Radiation Therapy. The Faculty also offers honors undergraduate programs in collaboration with the Faculty of Science and graduate MSc, PhD and MD/PhD programs in collaboration with the Faculty of Graduate Studies and Research.

The Faculty is now one of Canada's preeminent health sciences faculties, offering outstanding clinical care to patients, conducting world-class research and providing innovative educational programs to graduate and undergraduate students.

Faculty educators and clinicians work within one of Canada's largest health care regions and Faculty researchers attract over \$201 million annually in peer-reviewed research funding. The Faculty enjoys national and international recognition in the form of numerous Fellows of the Royal Society of Canada (FRSC) and two Fellows of the Royal Society (FRS), Canada Research Chairs, University Professor, Kaplan Laureates, Howard Hughes International Scientists and Laureates of Prix Galien and Manning awards. Graduates of the Faculty are highly regarded and go on to assume national and international leadership roles in a diverse number of health care fields.

Members of the Faculty

Note: An asterisk (*) by the name indicates a secondary appointment within the Faculty. (This is not used for Deans and Directors.)

Office of the Dean

Interim Dean

R Fedorak

Vice-Dean, Faculty Affairs

D Kunimoto

Vice-Dean, Education

F Brenneis

Vice-Dean, Research

D Evans

Chief Operating Officer

V Wulff

Senior Associate Dean,

Dental Affairs

P Major

Associate Deans

M Lang (Faculty Development)

N Gibson (Clinical Faculty)

T Hillier (MD Program)

T Hobman (Research Facilities)

R Kearney (Postgraduate

Medical Education)

J Konkin (Community

Engagement & Wellness)

H Ostergaard (Research,

Graduate Programs)

L Richer (Clinical/Translational

Research)

J Romney (Health Informatics)

K Jahangir (Lifelong Learning)

Assistant Deans

S Ali (Professionalism)

S Andrew (Education, Quality

and Accreditation)

E Dance (Resident Affairs)

P Hamilton (Undergraduate

Medical Education)

M Moreau (MD Admissions)

B Wilson (Student Affairs)

W Wong (Postgraduate Medical

Education)

Directors

P Brett-MacLean (Arts and

Humanities in Health and

Medicine)

N Gibson (Simulation)

C Wong (Academic

Technologies)

Faculty Departments

Anesthesiology and Pain Medicine

Chair and Professor

M Murphy

Administrative Officer

J Jubinville

Professors

BA Finegan

RA Kearney

S Rashiq

B Tsui

M Zaugg

Associate Professors

B Dick

D Dillane

B Kerr

Assistant Professor

S Bourque

Clinical Professors

JN Armstrong

J Devitt

DB DuVal

DP Gray

R Haugen

R Hudson

*MS Jacka

N Klassen

B Knight

J Lilley

S Paterson

RF Seal

S Sidhu

MK Simmonds

Associate Clinical Professors

M Auld

RG Bergstrom

E Bishop

R Brown

M Buss

D Cave

A Chiarella

MR Cohen

K Doyle

T Eliasson

M Ewanchuk

KA Faccenda

F Gragasian

J Green

M Hogan

P Kulkarni

BE Marchak

T Ozelsel

GA Perez

B Ramsey

H Sandhu

J Taam

*D Townsend

P Wildgrube

TW Yeh

M Yukawa

Assistant Clinical Professors

B Achen

A Barker

K Bateman

J Belzil

JM Berube

S Bhachu

M Breitling

BJ Bucyk

D Chen

R Cheng

PG Cisar

BP Delbecq

JM Dupuis

A Fielding

W Flexer

V Ford

A Freed

AS Guest

S Gupta

DA Hardy

LY Huang

V Ip

N Kembhavi

M Knezevich

JP Koller

J Krancjevic

B Kropelin

ER Lazar

T Leung

J Lujic

IA MacDonald

C Mack

V Maragh

P Matthey

DA Mercereau

JA Moir

D Muzyka

L Nadeau

L Nadwidny

C Needham

CJ Noble

A Nunes

T O'Leary

SA Olson

P Paetsch

D Patil

BZ Petriw

M Quinn

SJ Reid

H Reine

A Roopnundh

L Scheeler

MR Simmonds

D Snider

I Sobolev

J Soong

B Sowa

G Steel

S Stetsko

C Tang

*C Torok-Both

C Twomey

BP Unger

O Ziwenga

Clinical Lecturers

N Baldonado

L Baron

S Behmanesh

MH Bercovich

R Bhalla

V Bobart

R Bowman

R Boyle

S Broemling

A Brown

C Cave

D Chan

JR Charlton

A Cheng

JH Chin

J Fuger

B Godlewski

B Goranson

P Holinski

JC Hrazdil

CM Hui

R Kindziarski

J Klinck

E Kwon

A LaFontaine

M Lalonde

J Largoza

D Leighton-Lane

L McGowan

J Moyo

A Neufeld

AC Ng

S Nickolet

L Noonan

C Osmond

J Popoff

*K Reid

T Rimmer

T Rudge

F Rudolph

OJ Schneider

S Singh

G Smith

D Terblanche

H Ting

I Wachowski

Q Wensveen

Adjunct Professors

P Brindley

C Eagle

W Etches

Adjunct Assistant Professors

G Bostick

A Chuck

Professor Emeritus

BT Fincuan

Biochemistry

Chair and Professor

CFB Holmes

Assistant Chair, Administration

M Hobman

Professors

RC Bleackley

DN Brindley

J Casey

MJ Ellison

L Fliegel

JNM Glover

*R Godbout

BD Lemire

*L Li

A MacMillan

M Overduin

M Michalak

L Schang

MC Schultz

L Spyrapopoulos

BD Sykes

*DLJ Tyrrell

DE Vance

JH Weiner

*D Westaway

H Young

Associate Professors

*S Bakash

R Fahlan

C Fernandez-Patron

IS Goping

J Lemieux

D Stuart

N Touret

H Wille

*D Zhang

Assistant Professors

*P Hwang

Professors Emeriti

*CE Cass

RS Hodges

MNG James

CM Kay

NB Madsen

RN McElhaney

VH Paetkau

P Scott

LB Smillie

JC Stone

Faculty Service Officers

R Milner

J Parrish

A Wright

Biomedical Engineering

Chair and Professor

RE Burrell

Professors

C Beaulieu
MA Gorassini
*R Lambert
*KG Pearson
*A Prochazka
*RV Rajotte
AH Wilman
*JF Wolfaardt

Associate Professors

*T El-Bialy
*DJ Emery
*N Johma
*T McMullen
RB Thompson

Assistant Professors

*N DeZanche
*D Gross
*S Kalra
*L Le
N Malykhin
*A Yahya

Professors Emeriti

PS Allen
D Fenna
DJ Griffiths
ZJ Koles
TR Overton
RE Snyder
*RB Stein

Adjunct Professors

S Adeeb
A Adetol
A Amirfazli
Y Belhamadia
D Bennet
J Campisi
J Carey
J Chen
D Collins
A Cook
MR Doschak
M El-Rich
H Fenniri
K Fouad
A Freed
H Gul-Uludag
JO Hahn
B Holinski
J Jaremko
KE Jones
G Kawchuk
D Krushelnycky

D Li

EHM Lou
W Moussa
M Olson
NG Shrive
J Tuszynski
H Uludag
L Unsworth
A Vette
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B Wright
J Yang
RJ Zemp

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J Yang
RJ Zemp

*SC Hughes

P LaPointe

T Simmen

A Simmonds

Assistant Professor

B Montpetit

Adjunct Professor

JD Aitchison

Professors Emeriti

RB Campenot

TL Krukoff

RS Smith

Dentistry**Chair and Professor**

PW Major

Associate Chair (Student Affairs)

TR Stevenson

Associate Chair (Academic)

SK Patterson

Associate Chair (Dental Hygiene)

S Compton

Associate Chair (Research)

P Flood

Assistant Chair (Administration)

S Roy

Communications Officer

C Deslaurier

Curriculum Coordinator

G Gaudet-Amigo

Professors

S Compton

DN Dederich

FM Eggert

M Febbraio

P Flood

C Flores-Mir

LW Kline

PW Major

WT McGaw

NC Milos

SK Patterson

DJ Pehowich

E Peters

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S Lalh

K Lung

W Preshing

J Ritchie

C Robinson

TR Stevenson

P Williamson

KW Wong

CC Yu

DC Yu

G Zenith

Associate Clinical Professors

M Armstrong

Hisham Badawi

K Bapoo-Mohamed

DH Bedard

C Blackman

R Croutze

K Habib

I Hernandez

M Howell

D Kelner

I Kuc

EWL Kwan

VP Lee

T Lee-Knight

B Linke

J Lockau

S Lockwood

DJ MacDougall

BR Neumann

M Parfitt

A Senior

A Sheppard

A Sneazwell

E Steinbring

N Thie

J Valentine

WG Wesner

M Witmans

Assistant Clinical Professors

N Alsufyani

S Ash

T Aucoin

M Bennett

TS Bennett

L Best

A Brodie

D Brown

K Cheng

S Chiew

J Clarke

J Cornish

D Correia

K Currie

T Debevc

A Dela Cruz

D Demchuk

W Dewar

D Dietz

M Duncan

J Eberhardt

G Grykuliak

D Haberstock

S Heglund

S Houshyar

I Hucal

J Huynh

L Hursin

J Jacob

N Kaipatur

D Kawahara

D Kemp

I Kornerup

B Kula

E Lam

S Lee

K Lobay

D Lobb

D Lunardon

I Mah

M Major

L Mar

J Margolus

D Maskell

I Ongaro

M Pokroy

D Powell

R Pratt

J Pruner

M Razavi

R Reiter

S Russett

M Salehyar

K Sauze

K Sperling

R Straga

A Sumar

A Tam

R Tepy

S Thawer

D Tsujikawa

T Vankka

T Verhaeghe

D Vincelli

J White

B Wong

M Wright

P Wu

J Yacyshyn

HC Yu

Clinical Instructors

S Abtahi

J Alcazar

S Al-Daghreer

M Altalibi

M Al-Saleh

B Aucoin

P Badri

P Bartkus

R Beauchamp

D Bharwani

A Borgly

J Brown

D Burnham

H Choriatis

P Chowdhury

D Czernick

E Dionne

M Elsalhy

M Elyasi

G Forrest

M Gosselin

C Huber

S Hulland

K Khabra

N Kim

N Kobagi

R Lee

S Lee

C Layton

J Lo

MA Mandich

M Mueller

J Pan

J Pereira

D Perusini

L Riemer

J Salame

N Teoh

L Tieu

J Snesrud

J Van Malsen

A Wong

J Yalte

SR Yasini

A Yip

J Yu

L Zylstra

Faculty Service Officer

D Harley

Adjunct Professor

J Carey

Adjunct Associate Professors

M Doschak

H El-Hakim

E Kalaydjian

S Meleshko
A Mistry
S Mithani
J Mohler
W Molberg
M Moss
K Muwanguzi
DW Neilson
K Neilson
LK Nguyen
D Nixon
K O'Brien
J Pattison-Bacon
S Potgieter
B Read
D Reid
J Reid
J Reitsma
R Ribeiro
A Roche
R Rosenblum
S Ross
J Sainsbury
L Sharma
R Sherman
R Singh
A Stagg
TF Stetsko
DF Stewart
J Stonehocker
J Thompson
A Toeg
M Tousignant
F Voon
D Watrich
C Westover
D Wheeler
S Wiens
J Williams
R Wittmeier
C Wong
A Yeung
AD Yeung
M Young
J Zaazirny
*R Zhang

Adjunct Professor

L Francescutti

Assistant Adjunct Professors

S Curtis
*L Evered
S Jelinski
M Oliva
L Tchir
B Windwick

Associate Adjunct Professors

S Ali
W Craig
H Jou
D Nichols
T Turner
I Vicas
M Yarema
P Yoon

Adjunct Clinical Lecturer

A Reid

Family Medicine**Chair and Professor**

LA Green

Administrative Officer

M Perreault

Professors

GM Allan
NR Bell
A Cave
BM Dobbs
MG Donoff
N Drummond
P Humphries
C Lebrun

DG Moores
J Triscott

Associate Professors

HL Banh
FR Brenneis
D Campbell-Scherer
L Charles
S Garrison
F Janke
L Keenan
D Klein
MR Kolber
J Konkin
S Koppula
C Korownyk
D Manca
D Nichols
J Parmar
D Ross
S Ross
G Salvalaggio
S Schipper
L Steblecki

Assistant Professors

L Au
O Babenko
C Cardinal
K Chan
JT Chmelicek
T DeFreitas
A Gruneir
MP Morros

Clinical Professors

FW Armstrong
SK Aung
AE Ausford
AL Bailey
G Blais
JF Chiu
I Colliton
E Denga
*TFX Corbett
*NP Costigan
N Flook
*T Graham
TD Kolotyluk
EP Schuster
A Taube
H Woytyuk
H Zirk

Associate Clinical Professors

M Abbasi
JB Armstrong
PMD Armstrong
BV Brilz
J Bromley
*MA Cherniwchan
WE Clelland
JE Craig
*GE Cummings
NAC Da Cunha
DP Edgcumbe
*CGM Evans
AC Gigg
N Hans
HR Hindle
M Hurlburt
AA Indar
K Jahangir
P Jensen
P Kivi
GA Lamoureux
*DL Larose
A Lindblad
CJ Lord
KAH Lundgard
B Lycka
LM Ma
BK McPeak
BJ Millar
AM Milne-Epp
MB Moran
R Naiker
P Ondrus
EW Papp

KM Peterson
*RA Purser
OS Rahaman
BD Ritchie
JM Robinson
M Rose
S Simon
A Spak
RJ Wedel

Assistant Clinical Professors

D Abdellatif
KJM Abel
S Ahmadijad
G Ahmed
FO Akindele
T Bakshi
DH Bannmann
D Behn Smith
PM Belda
JE Bell
*E Berdusco
RS Birkill
*DW Bond
*M Boulanger
BW Boyko
TB Bray
*JJ Brown
MJ Caffaro
PA Caffaro
DA Carew
R Carter
J Caulfield
S Chakravarty
TS Chan
SW Chambers
HJL Chen
SA Christenson
D Corby
*R Cunningham
WJ Daviduck
E Denga
KD Dinyari
LD Dujon
V Duta
S Edani
*B Edgecumbe
SM Fairgrieve-Park
SL Fallis
TF Flanagan
*WV Flexner

DC Fung

TL Fung

AL Gainer

K Ghali

CR Gingles

*MS Gross

CE Haig

RA Halse

RS Hauptman

CD Hodgson

ES Holmes

J Janmohamed

RB Kaasa

H Kammerer

KP Kelly

DW Korzenowski

*RT Kruhlik

D LaBuick

R Laughlin

AS Lee

K Loeffler

*MJ Long

SS Lou

SE Low

JA Makokis

LE Mann Hosford

MG Mannarino

CW Marcet

A Marin

RA Martin

T McKeown

DP Miller

*A Mirza

RC Misfeldt

EM Mori-Torres

JD Morrow

S Murji

*AR Murray

A Naismith

*B Nankissoor

ED Ndovi

M Nouh

RL Oishi

TM Penrod

*EB Persson

*SA Poplawski

N Rafati

TF Ranieri

N Rao

GJ Rey-Parra

*M Rico

RD Rogers

C Rowntree

K Rylance

S Samuel

GR Sawisky

WE Schneider

G Schwalffenberg

Y Shi

J Shimizu

CA Sikora

LL Smith

SD Smith

S Soehn

TPW Souster

RM Stepanko

H Sternberg

J Stickney-Lee

L Thomas

GA Torok-Both

DV Tran

EB Tredget

SA Tsikata

*AW Ushko

PM Verones

DRJ Vincent

*AF Walker

L Wasilenko

ML Wesner

ML Wickland-Weller

I Williamson

JA Wismark

Clinical Lecturers

S Abood

W Ackermann

RJ Ackroyd

M Addison

FO Adebayo

KP Adzich

*I Ahmad

RM Ahmad

I Akinjise

DR Akintola

JJ Aleker

A Algu

N Alingary

N Al-Kayssi

MC Allan

E Almaden-Camacho

EJ Alonso

I Amusan

RR Anderson

K Anderson-Hill

JR Andreiuk

E Andrews

DM Andriashek

K Andrusky

KL Anstey

A Aradi

IJ Argals

GL Armstrong

GM Arps

M Askar

K Atchison

WB Azzi

H Bablitz

SA Backlin

B Bahler

JL Baker

*DJ Barer

EA Barker

CA Barnsdale

CS Barr

CA Barreth

KR Barry

DC Bartie

LA Beamish

N Bector

PE Bell

M Benard

K Bennett

JE Bergens

K Bernes

L Bernier-Lycka

A Bertagnoli-Hansen

S Beshai

S Bhardwaj

A Bhimji

LS Bick

JJ Blaker

JD Bly

GM Bokenfohr

S Borrelli

N Botha

PJ Bouch

GC Boughen

HG Bowden

L-E Bredesen

LE Brehmer

KL Brown

HD Brussow

RM Buck

LA Buhr

LE Burger

EA Button

TJ Byers

E Calhoun

GL Campbell

KB Cardinal

N Cardinal

LJ Carter

MR Cassim

DB Cave

DR Chan

JC Chan

JS Chan

HS Chana

KS Chandrasenan

M Chapelski

SG Charbonneau

A Chari

I Chatterjee

HN Chau

M Chaudhry

U Chauhan

FJ Cheng

V Chetty

R Cheung

BP Chew

S Chiang

ME Chisholm

AYL Chiu

Z Chranowski

WG Church

NN Chychota

J Clarke

L Coetzee

JM Colebrook

A Coma

PR Comeau

JR Corrigan

NB Corser

EC Côté

P Coulson

RF Crowe

S Crum

H Cuddihy

C Cull

M Currie

L Curtis

JA D'Costa

MC Darby

TS Darnell

S Datar

RG Davidson

WLM Dawson

*BC Deane

J de Bruyn

L de Freitas

HL de Jongh

H de Ridder

WT de Vos

LM Der

N Dhaliwal

GS Dinsa

A Dobrousin

A Draginda

M Dry

D Duffy

M Dufresne

S Duia

GS Dulai

RH Dunbar

GC Du Plessis

M Du Plessis

T Du Toit

M Easwara Murthi

MS Eckhart

SA Eliason

FF Elesin

EO El-Hajj

CJ Ellis

MS Elmusharaf

JF Erasmus

M Erasmus

TN Erickson

AJ Esterhuizen

D Ethier

DG Faulder

LA Fernando

DW Fields

MT Fillion

BL Fischer

*SD Flanagan

AH Fong

C Foolen

MA Forder

JS Fowke

AB Franke

I Gagnon

KE Game

CM Gannon

AS Garbutt

*E Gawley

C Gee

AG Genge

SC Ghitter-Mannes

SK Gill

JM Godel

AB Gokul

H Goosen

CG Gordillo

HA Gordon

A Gossmann

A Goswami

R Gounden

RJ Gregg

RI Greidanus

W Griffin

RR Gurges

A Halladay

J Hamm

RR Hanelt

VM Hanlon

AL Hargrove

AC Harmse

M Hartt

B Hasan

DA Hasinoff

M Hauptfleisch

J Hawkwood

BC Hayden

JA Hernberger

S Heydenrych

EE Hibbitts

JS Hilner

J Hirji

*C Hlushak

WD Hogarth

J Holm Jhass
SM Hood
S Horvey
AJ Hrdlicka
*DJ Hryciuk
KD Huber
KW Hult
C Iordache
HS Irvine
S Jabbari-Zadeh
A Jackson
WG Jacobs
L-A Jansma
AJ Jarema
A Jaroni
A Jeraj
AL Jerome
SL John
PM Johnson
CG Johnston
LDT Jones
AL Jorgensen
NS Karnik
MMK Karpivyevich
S Karpman
D Kasavan
KA Kasha
JC Kassam
M Kauchali
K Kay-Pfau
JS Keay
RE Keller
CJ Kendall
OT Khan-Afridi
M Khurana
S Kibria
RL Kijewski
DG Killick
JEM Kirkwood
M Kirwan
AJ Kohler
AM Kohler
KM Koliaska
S Konyonenbelt
S Kostov
VD Krinke
IE Kritzinger
SG Kroeker
LM Kulak
AL Kutash
P Kwan
S Kwon
C Laidlaw
M Lal
RA Lamoureux
EP Landsbergen
JM LaRue
CR Lavoie
HP Le
JH Lee
K Letley
PJ Lewis
B Li
E Li
Z Li
MM Llm
D Lisoway
S Liu
FH Lo
JM Loge
RM Loiselle
BM Long
B Lott
AJ Louw
C Lu
C Ma
CJ MacCarthy
IR MacDonald
BA Macedo
JM Maciejko
DW MacIver
SJ MacIver
SBA MacLean
T Madzimume
P Maheshwari
KD Mailo

SA Makhdoom
SS Malik
AG Mallett
S Manchikanti
M Maneshgar
*K Mangas
M Marcu
PA Marner
BW Martin
KAC Martin
S Mausolf
JL May
A Mayes
*GG Mazurek
AM McBain
K McBeath
M McCall
DM McCarty
A McDonald
TJ McDonald
KD McFarlane
C McKibbin
NE McNeilly
KL McNicol
KL Meador
DM Michaels
D Millard
GW Ming
S Minnett
JR Minsos
R Modi
GC Moe
RA Moffatt
TM Mogus
ZA Mohamed
TM Mohanraj
*JA Mohler
*W Molberg
MK Morrison
FM Mosaico
SM Moussa
JM Muller
JD Murphy
RJ Muthanna
F Mydeen
O Naidoo
L Nanninga-Penner
AS Narula
MR Nawrot
CA Naylor
S Needham
*KD Neilson
RAJ Neuls
PJ Newnham
LP Nguyen
KM Nicholson
R Nieman
MJ Nizam
AE Noga
TC Nordli
RD Northcott
BC Nwaka
J Obst
JA O'Connor
SO Ogbeide
JO Ojedokun
OS Oladele
JD Ollesen
CE Olson
O Oosthuizen
WDL Orr
C Otto
SE Oyama
P Palma
P Paludet
JD Paproski
CD Parameswaran
DJ Paras
AA Pathan
M Pattison-Bacon
TA Peebles
LD Pernisie
G Perry
B Pezeshki
LM Pfeifer
TJ Phillips

DA Pickle
K Piebiak Patterson
BL Piepgrass
HM Plucinska
M Poitras
AJD Pope
HJH Potgieter
NA Potvin
NS Potvin
GD Prince
J Prins
M Pronovost
JK Quong
AR Rahn
R Rajput
J Ramsahoye
G Ramsay
NP Rattan
A Raubenheimer
S Raubenheimer
JC Regehr
KM Rekieh
PI Renfree
D Rengan
A Riaz
Q Rizvi
JA Robinson
AM Rosborough
DR Ryan
A Sadiq
AQ Saincher
M Saint-Martin
JM Sametz
GM Samyia
JJ Saunders
AL Sawchuk
A Sayani
MR Sayeed
*GD Scheirer
JE Schimpf
GO Seavilleklein
M Senekal
B Sereda
N Shahoo
E Shaker
S Shakil
MTL Shandro
*RK Sherman
R Shute
HS Sidhu
SP Silvalingam
RJ Simard
A Singh
S Slack
J Slanina
V Smith
D Smyth
CM Soneff
RS Soni
P Sonpar
KJ Sorenson
OA Soyege
S Squires
WB Steed
*TP Stetsko
*DF Stewart
D Steyn
FM Steyn
H Strydom
S Sultana
A Swinton
E Tailfeathers
OA Taiwo
T Taiwo
K Tariq
IS Taylor
MJ Thain
MA Theman
C Ticu
G Tirschmann
LB Torok-Both
R Torrie
A Train
T Tran
JWY Tsang
JE Tse

SA Tsikata
JK Tupper
RL Turner
SL Turner
F Unwala
ZA Van den Heever
E van der Merwe
HHH van der Watt
JP Van Der Westhuizen
R van Rooyen
SA Van Zyl
A Vasanji
L Venter
O Vicarrudin
Z Vicarrudin
M Viljoen
GS Vitug
JS Voldeng
EG Walter
RG Warren
VM Warren
SM Warwick
W Wash
S Wat
J Weaver
DS Welch
*CN Westover
RJ White
BM Wiens
MF Wilderdijk
B Willis
LA Willox
TM Withers
AD Witten
CT Wong
AJ Woo
BL Wood
JL Woodruff
KW Worry
MB Wray
S Yalho
DL Yamabe
M Yan
S Yao
*AK Yeung
J Yeung
TTC Yeung
* MJ Yeung
J Yue
JFW Yue
F Zakaria
DK Zalasky
RX Zhang
JM Zielinski

Professors Emeriti

RG Chaytors
GL Higgins
GR Spooner
I Steiner

Faculty Service Officers

S Khera
O Szafran

Adjunct Professors

DJ Clandinin
RL Fainsinger
DK Heyland
B Holroyd
P Jacobs
N Keating
E Waugh

Adjunct Associate Professors

S Esmail
J Jackson
DL Myhre
DM Oneschuk
N Shaw

Adjunct Assistant Professors

F Arndt
F Esfandiarpour
D Naidu

C Poth

Care of the Elderly Director and Professor

J Triscott

Professor

B Dobbs

Associate Professor

J Parmar

Clinical Professor

H Zirk

Associate Clinical Professors

M Abbasi
P Kivi
LM Ma
MB Moran

Assistant Clinical Professors

S Ahmadienjad
H Kammerer
A Marin
EM Mori-Torres
N Rao
S Samuel
J Shimizu
J Stickey-Lee
L Wasilenko

Clinical Lecturers

A Bertagnoli-Hansen
MT Fillion
J Gounden
AL Jerome
M Khurana
AL Kutash
B Li
E Li
Z Li
BM Long
M Marcu
C Otto
B Pezeshki
AM Rosborough
M Saint Martin
T Taiwo
J Weaver

Laboratory Medicine and Pathology

Chair and Professor

M Mengel

Administrative Officer (vacant)

Professors

J Acker
*P Campbell
S Damaraju
*J Elliott
J Hugh
R Kumar
R Lai
XC Le
XF Li
J Martin
*TW McGaw
XL Pang
*J Preiksaitis
RP Rennie
C Sergi
K Solez
*AR Turner
G Tyrrell
*D Wishart

Associate Professors

G Bigras
GS Cembrowski
B Chiu
LWL Chui
J Deschenes
S Drews
J Fuller

CH Lee
R Leng
S Nahiriak
L Puttagunta
DC Rayner
LJM Russell
B Sis
I Sosova
*S Taylor
A Thiesen
F van Landeghem

Assistant Professors

J Bacani
C Charlton
S Drews
N Giannakopoulos
LG Hidalgo
I Izevbave
*E Leslie
K Schnabl
A Szkotak
H Zhang

Clinical Professors

P Alakija
RC Berendt
G Clarke
P Colbourne
S Girgis
J Hannon
TE Higa
T Higgins
GH Johnson
GR Jones
M Kattar
DW Kinniburgh
A Lacson
DF LeGatt
C O'Hara
C Prosser
N Satkunam
*EH Schloss
JR West

Associate Clinical Professors

S Anwar
H Berendt
S Brown
WF Dong
*K Kowalewska - Grochowski
MN Mahmood
GD Neuman
N Rayani
M Saddik
S Silverman
ICF Sin
D Tung

Assistant Clinical Professors

B Adeagbo
LM Aye
B Balachandra
B Bannach
V Barakauskas
M Bodnar
E Brooks-Lim
T Chaba
S Chan
G Charrois
I Chaudhry
S Chow
M Estey
C Ewanowich
A Fuezery
C Garady
H Gerges
HL Gritter
T Hailu
J Hwang
C Ispas
K Khetani
S Kulkarni
MC Lee
MW Lee
PL Letendre
N Lilic
JQ Lu

A Macy-Davey
P Makarla
VL McCann
DR McLean
A Meliti
T Nazir
R Onell
W Ramsey
K Rodriguez-Capote
A Reid
K Schnabl
A Sim
J Slatnik
A Venner
B Walker
C Walker
M Weinberg
K Wong
GO Wood

Clinical Lecturers

M Agoumi
M Beach
L Canterbury
C Chatterton
W Chen
K Chung
S El Malti
J Gofton
J Gray
A Halpin
R Hsu
J Huang
T Hung
T Jones
TY J Le
D Lee
V Meunier
J Moreno
J Raizman
A Salarieh
K Sivarajah
L Stang
B Tong
C Wu
MH Yu

Professors Emeriti

FJ Bamforth
MK Dasgupta
*JB Dossetor
PA Gordon
LH Honore
S Hruday
LD Jewell
ES Johnson
CC Lin
GA Machin
LE McGann
BW Mielke
G Nguyen
RA Stinson
RJ Swallow

Adjunct Professors

S Gabos
G Jiang
M Lai
I Mirza
PN Nation
J Xing
XE Zhang

Medical Laboratory Science**Director and Associate Professor**

LE Purdy
Administrative Officer
(vacant)

Associate Professors

J Holovati
K Lew
M Keelan
R Martindale

CJ Ward

Assistant Professors

A VanSpronsen
V Villatoro
Lecturer
EE Rivait

Clinical Lecturers

R Cunningham

Other Academic

K Matejka (CAST appointment)

Medical Genetics**Chair and Professor**

M Walter

Administrative Officer

SD Barham

Professors

*K Aitchison
S Andrew
*D Eisenstat
*OJ Lehmann
*IM MacDonald
*H McDermid
*L Mitchell
MJ Somerville
*O Suchowersky
Z Wang
R Wevrick

Associate Professors

*W Allison
*F Berry
*F Bolduc
*D Burshtyn
AJK Chan
*D Graf
S Hughes
SL Hume
NJ Leonard
K Siriwardena
S Taylor
*D Underhill

Assistant Professors

O Caluseriu
S Jain Ghai
J. Lazier
T Yokota

Assistant Clinical Professors

S Merchant
R Sisk
M Yoshimoto

Professor Emeriti

S Bamforth
DW Cox
D Gilchrist

Medical Microbiology and Immunology**Chair and Professor**

M Gotte

Professors

*C Anderson
*N Ashbolt
*L Babiuk
M Barry
*D Befus
*M Belosevic
*JF Elliott
DH Evans
*M Fabbraio
*P Flood
E Foley
*S Forgie
*PF Halloran
*T Hobman
M Houghton
K Kane
*P Lacy
*K Magor

*A Mason
HL Ostergaard
*LM Pilarski
*C Power
*JK Preiksaitis
*L Schang
JR Smiley
*C Szymanski
*GD Taylor
*J Tuszynski
DLJ Tyrrell
*GJ Tyrrell
*W Vaudry
*JH Weiner
*LJ West

Associate Professors

T Baldwin
D Burshtyn
E Foley
B Hazes
*D Hemmings
R Ingham
K Kowalewska-Grochowska
*B Lee
S Pukatzki
*J Robinson
*L Saxinger
*G Tipples

Assistant Professors

*S Elahi
*M Hawkes
*M Kulka
D Marchant
M Shmulevitz
*S Urschel
*S Yanow

Clinical Professor

*B Romanowski

Assistant Clinical Professors

A Chandran
J Kanji
J Nigrin
N Solomon
R Verity

Professors Emeriti

E Diener
JMS Dixon
LJ Guilbert
SI Hnatko
RT Irvin
FL Jackson
BM Longenecker
RG Marusyk
*L Miedzinski
JA Robertson
*L Sigler
DE Taylor

Faculty Service Officers

D Dragon
K Ellison
J Gnarp
S Ogg

Medicine**Chair and Professor**

B Ballemann
Assistant Chair, Administration
B Hiscock

Cardiology**Division Director and Professor**

W Tymchak

Professors

PW Armstrong
H Becher
JR Burton
B Cujec
W Dafeo
MM Graham
D Johnstone

ED Michelakis
B O'Neill
G Pearson
P Raggi
RT Tsuyuki
RC Welsh

Associate Professors

T Bungard
J Ezekowitz
G Gyenes
PI Kaul
DH Kim
SKM Kimber
S Koshman
LD Lalonde
MS McMurtry
G Oudit
I Paterson
M Shanks
BH Sonnenberg
I Vonder Muhll

Assistant Professors

B Baine
C Butler
R Sandhu
M Shanks

Clinical Professors

J Choy
T Fenske
PV Greenwood
SS Gulamhusein
WKK Hui
Z Lakhani
MPJ Senaratne
DA Taylor
RG Williams

Associate Clinical Professors

N Alhulaimi
NS Brass
M Chan
LA Kasza
E Lockwood
M Shibata
S Sivakumaran
T Talibi

Assistant Clinical Professors

M Dorsch
Y Fu
D Hammer
M Hanninen
T Hruczkowski
A Jones
W Keeble
S Khandekr
RCM Leung
TG Muzyka
G Nogareda
KV O'Reilly
K Ranjbar
S Sharma
T Taher
B Tyrrell
N Wahab
J Windram
J Wong
KS Woo

Clinical Lecturer

L Valtuille

Assistant Clinical Professor (Secondary)

S Sharma

Professors Emeriti

M Haraphongse
BI Jugdutt

Adjunct Professors

WC Chang
R Coulden
S Goodman
M Kanthoch
R Sheldon

Adjunct Assistant Professors

S Bhattacharya

AW Chuck
M Haykowsky
A Jannomahmed
C Norris

Clinical Hematology**Division Director and Professor**

J Brandwein

Professors

LM Larratt
DBC Ritchie

Assistant Professors

A Peters
L Saini
I Sandhu
C Wu
N Zhu

Associate Clinical Professor

M Game

Assistant Clinical Professors

M Bodnar
E Liew
M Talaria

Clinical Lecturers

L Bolster
J Patterson
T Van Slyke

Faculty Service Officer

M Hamilton (FSO II - Assistant
Teaching Professor)

Adjunct Professor

C Venner

Professors Emeriti

A Janowska-Wieczorek
MJ Mant
AR Turner

Preventive Medicine**Division Director (Interim) and Professor**

N Cherry

Professors

J Beach
D Zakus

Associate Professors

B Quemerais
S Straube

Assistant Professor

A Doroshenko

Clinical Professors

H Bryant
G Predy

Associate Clinical Professors

R Briggs
M Johnson
J Talbot

Assistant Clinical Professors

G Benade
O Bennett
A De Villiers
D Hinshaw
G Keays
K Koliaska
M Lavoie
T Parminder
R Rani
C Sarin
H Virani

Assistant Clinical Professor (Secondary)

C Sikora

Adjunct Professors

R Coppock

G Gibbs
E Jonsson

Adjunct Associate Professors

K Corbet
K Harrison
H Hoffman
V Lappi
B Lauber
J Razavi
R Stacy
S Tsekrekos

Adjunct Assistant Professors

T Lawley
M Magnan

Department of Medicine**Associate Professor**

L Lourke

Assistant Clinical Professor

K Grimmsrud

Clinical Professor (Secondary)

D Legatt

Adjunct Associate Professor

N Dower

Adjunct Assistant Professor

F Davoine

Dermatology and Cutaneous Sciences**Divisional Director and Professor**

R Gniadecki

Professors

A Brassard
J Elliott
T Salopek

Clinical Professors

J Brown
J Rao
EH Schloss
GE Searles

Associate Clinical Professors

MT Dytoc
JY Liao
A Lim
MJA Sapiazsko
M Taher

Assistant Clinical Professors

E Chow
M Kalisiak
CP Keeling
NR Wasel

Clinical Lecturers

M Cheung-Lee
P Grewal
TC Nakatsui

Adjunct Professors

L Fiorillo
GJ Lauzon

Endocrinology and Metabolism**Division Director and Professor**

PA Senior

Professors

CLY Chik
RZ Lewanczuk
L Mereu
DW Morrish
EA Ryan
AM Sharma
S Sharma

J Vance
Associate Professor
 J Romney
Assistant Professor
 S Cheng
Clinical Professor (Secondary)
 C Prosser
Assistant Clinical Professors
 J Jacquier
 S Kwong
 S Li
 R Mitchell
 S Pertman

Clinical Lecturers
 S Cawsey
 S Parameswaranathan

Associate Clinical Professor (Secondary)
 K Siminoski

Associate Clinical Professors
 PA Hardin
 K Hopkins
 T McNab
 A Opgenorth

Adjunct Professors
 *S Harvey
 J Shapiro

Adjunct Associate Professor
 JA Johnson

Adjunct Assistant Professor
 T McMullen

Professor Emeriti
 PM Crockford
 E Toth

Gastroenterology

Division Director and Professor
 S Van Zanten

Professors
 VG Bain
 LA Dieleman
 RN Fedorak
 K Goodman
 LM Gramlich
 P Jacobs
 M Ma
 KL Madsen
 DC Sadowski
 GS Sandha
 G Wong
 W Wong

Associate Professors
 J Abraldes
 L Bistriz
 KS Gutfreund
 D Kao
 A Lazarescu
 AL Mason
 A Montano-Loza
 P Tandon
 CKW Wong

Assistant Professors
 B Halloran
 C Karvellas
 J Liu
 R Sultanian
 C Teshima
 S Zepeda-Gomez

Clinical Professors
 RJ Bailey
 CM Switzer

Associate Clinical Professors
 A Bala
 JP McKaigney
 *MS Millan

EA Semlacher
Assistant Clinical Professors
 JP Ferguson
 N Hoque
 K Kroeker
 K Matic
 R Penner
 C Render
 S Robbins
 J Siffledeen
 L Stead
 DN Todoruk
 BMA Walters
 K Wong
 M Zeman

Clinical Lecturers
 A Hanna
 A Lim
 G Lutzak
 A Morse
 M Pinchbeck
 V Selvarajah

Adjunct Professors
 D Cox
 JB Meddings
 Y Zhang

General Internal Medicine

Division Director and Professor
 N Kassam

Professors
 BW Fisher
 PG Hamilton
 R Hayward
 SR Majumdar
 F McAlister
 R Padwal

Associate Professors
 V Daniels
 CE Goldstein
 R Grynoch
 *R Khurana
 WWK Sia

Assistant Professors
 D Broadhurst
 M Ghosh
 P Hwang
 J Ringrose

Clinical Professors
 H Baillie
 K Bowering
 A Colbourne
 N Dean
 NE Gibson
 E Kretzul
 TK Lee
 *GF MacDonald
 BJ Wirzba

Distinguished Clinical Professor
 A Voth

Associate Clinical Professors
 H Bertozzi
 A Brisebois
 T Bryan
 G Hrynchshyn
 C MacDonald
 F Morales
 MG Nutting
 E Raff
 G Ramsay

Assistant Clinical Professors
 R Al-Agha
 J Allen
 D Au
 D Bartha
 M Baur
 PM Buckle

RJ Burris
 R Chea
 K Craig
 A Ghani
 E Gilbert
 R Grynoch
 P Guo
 A Hendricks
 J Kachope
 M Karolak
 PH Lam
 LER Malowany
 R Maraj
 M Moreau
 B Nankissoor
 J Nicholson
 JE Rouget
 A Tapardel
 H Tarhoni
 YN Westra
 T Wuerz
 S Zia

Assistant Clinical Professor (Secondary)
 S Khanda

Clinical Lecturers

A Au
 J Bakal
 N Bakshi
 A Bharnal
 L Bridgland
 K Cernohorsky
 S Chihirin
 H Choi
 R Choudhury
 A Fahoum
 RA Hosein
 R Hrimiuc
 S Ip
 S Kehlon
 H Leon
 G Nikoleychuk
 M Obeidat
 S Salman
 D Slabu
 B Sugars
 S Thompson
 E Toor
 S Vijay

Adjunct Professors
 D Gilchrist
 A Yeung

Adjunct Associate Professor
 A Esmail

Adjunct Assistant Professor
 G Sun

Professor Emeritus
 CH Harley

Geriatric Medicine

Division Director and Professor
 A Wagg

Professor
 DB Rolfson

Associate Professors
 K Alagiakrishnan
 AG Juby
 K Lechelt

Associate Clinical Professor
 FM McAllister-Lawson

Assistant Clinical Professor
 D Rucker

Adjunct Professor
 J Triscott

Adjunct Assistant Professor
 K Hunter

Nephrology

Division Director and Professor
 KK Jindal

Professors
 B Ballermann
 B Braam
 PM Campbell
 SM Cockfield
 SN Davison
 PF Halloran
 SW Klarenbach
 NI Pannu

Associate Professors
 MJ Courtney
 S Gourishankar
 N Jahroudi
 AW McMahon
 T Mueller
 AG Murray
 R Pauly

Assistant Professors
 Amino Bello
 N Lam
 K Wen

Clinical Professor
 S Caldwell

Associate Clinical Professors
 JSJ Bradley
 S Duggan
 R Grynoch
 S Habib
 CW Johnston
 U Qarni
 SP Reddy
 S Shurraw

Assistant Clinical Professors
 V Deved
 M Michalska
 A Pisani

Assistant Clinical Professor (Secondary)
 A Romanovsky

Adjunct Professors
 B Kaplan
 M Tonelli

Adjunct Assistant Professor
 D de Freitas

Professors Emeriti
 MK Dasgupta
 T Kovithavongs
 RA Ulan

Infectious Diseases

Interim Division Director and Professor
 S Shafran

Professors
 SC Houston
 AM Joffe
 DY Kunimoto
 JK Preiksaitis
 JD Taylor

Associate Professors
 R Ahmed
 I Chiu
 KE Doucette
 LM Saxinger
 SW Smith

Assistant Professors
 C Alvarez

Clinical Professors
 L Miedzinski
 B Romanowski
 A Singh

Associate Clinical Professors
 LR Boychuk

C Boyington
 R Harrison

Assistant Clinical Professors
 D Dixit
 D Kabbani
 J Kanji
 S Rosser
 D Virmani

Clinical Lecturers
 H Hoang
 D Marion

Faculty Service Officer
 R Cooper (FSO II - Assistant Teaching Professor)

Professors Emeriti
 EA Fanning
 G Goldsand

Adjunct Professors
 A Humar
 T Marrie
 L Tyrrell

Adjunct Associate Professors
 D Kumar

Adjunct Assistant Professors
 P Smychek

Neurology

Division Director and Professor
 D Zochodne

Professors
 JRM Camicioli
 MG Elleker
 JH Jhamandas
 W Johnston
 S Kalra
 S Kar
 WR Martin
 C Power
 A Shuaib
 D Westaway

Associate Professors
 N Ahmed
 G Blevins
 BH Buck
 K Butcher
 F Giuliani
 DW Gross
 TJ Jeerakathil
 KA Khan
 T Roberts
 MA Saqqur
 ZA Siddiqi
 P Smyth

Assistant Professors
 J Jirsch
 V Sim

Associate Clinical Professors
 Muratoglu
 ML Myles
 E Starreveld
 C Tai
 NJ Witt

Assistant Clinical Professors
 M Bussiere
 B Edguer
 M Hamadeh
 R Jassal
 J Kashmere
 M Knash
 K Makus
 J McCombe
 R Pokroy
 RN Roberts
 M Siddiqui
 PE Stenerson

Clinical Lecturers
 BJ Stewart
 N Sudharshan

Professors Emeriti
 MH Brooke

G Monckton
Adjunct Professors
 N Ashworth
 O Suchowersky
 K Todd
 SA Warren
Adjunct Assistant Professor
 S Cleary

Physical Medicine and Rehabilitation Medicine

Director and Associate Professor
 S Gray

Professors
 N Ashworth
 KM Chan
 V Mushahwar
 L Satkunam

Clinical Professors
 LA Bellamy (Emeritus)
 M Watt

Associate Professors
 J Hebert
 D Naidu
 S Yablon

Associate Clinical Professors
 R Burnham
 M DiPersio
 JB Guthrie
 J Townsend
 C Tuchak

Associate Clinical Professors
 H Acharya
 R Charbonneau
 A Currie
 S El-Maadawy
 J Irvine
 B Rambaranasingh
 E Sampson
 R Thiara

Clinical Professors
 A Aly
 J Chia
 S Gonzales
 C Hlushak
 R Jassal
 H Lindstrom
 M Pappachan
 T Yen

Adjunct Professors
 J Anderson
 W Dafeo
 N Dean
 *RB Stein

Professors Emeritus
 T Gordon

Adjunct Assistant Professor
 M Prowse

Pulmonary Medicine

Division Director and Professor
 H Vliagoftis

Professors
 AD Befus
 P Lacy
 DC Lien
 R Long
 GC Man
 I Mayers

Associate Professors
 M Bhatani
 L Cheung
 RW Damant

M Kalluri
M Stickland
D Vethanayagam
JG Weinkauff
EYL Wong

Assistant Professors
K Halloran
A Kapasi

**Clinical Professor
(Secondary)**
D Stollery

Associate Clinical Professors
JS Archibald
W Dickout
MK Heule
S Marcushamer
J Richman-Eisenstat
J Sebastian
EL York

Assistant Clinical Professors
M Bibeau
B Chiam
V Dhawan
J Dirks
W Leung
A Liu
L Melenka
A Shustak
K Sideri
P Wei

Clinical Lecturers
D Carney
C Irani
K Mulchey
A Parhar
J Yehya

Faculty Service Officer
B McNab (FSO II - Assistant Teaching Professor)

Adjunct Professors
DA Enarson
NRT Gibney
M Kulka

Adjunct Associate Professors
DJ Adamko
G Broderick
L Cameron

Adjunct Assistant Professor
G Verma

Professors Emeriti
A Herbert
BJ Sproule

Rheumatology

**Division Director (Interim)
and Professor**
SL Aaron

Professors
P Davis
WP Maksymowych

Associate Professors
JE Hornik
S Keeling
A Oswald
EA Yacyshyn

Clinical Professor
R Ferrari

Associate Clinical Professors
S Akbar
S Katz
DE Sholter
KJ Skeith
A Yan

Assistant Clinical Professors
PL Chiu
HN Jones
J Yeung

Professor Emeritus
AS Russell

Obstetrics and Gynecology

Chair and Associate Professor
R Chari

**Administrative Professional
Officer**
Shannon Charney

Professors
ST Davidge
C Flood
BF Mitchell
DM Olson
M Sagle
J Schulz
RW Turnell

Associate Professors
VA Capstick
S Chandra
R Chari
D Hemmings
V Jain
T Motan
A Schepansky
H Steed

Assistant Professor
M Hyakutake
Other Academic:
S Ross (CAST appointment)

Clinical Professors
M Bow
R Chua
T Corbett
S Genius
T Gleason
DJ Hodges
CF Hoskins
G Iwaniuk
M Lieberman
MS Mah
SN Schuurmans
IV Tataryn
T Unger
R Uretsky

Associate Clinical Professors
C Barnes
D Barreth
S Baydock
G Black
R Black
RJ Brown
H Danial
E DeDoming
G Jiwa
D Larose
A Lee
AM Long
J Mayo
JM McCubbin
B Muir
*A Plewes
H Robinson
M Roy
D Slade
F Tam
J Tankel
M Tauh
F Tsui
P Verma
J Wang
K Wiebe
C Wittner-Smith
B Wong
W Young

Assistant Clinical Professors
E Bader
C Ballermann
CL Cooke
*G Gray
J Griffiths
*S Gross
S Halleran

N Jilwah
A Kim
N Marais
K Naud
P Patel
*S Reid
A Romanovsky
T Stryker
A Uretsky
T Wells
C Young

Clinical Lecturers
A Aiken
G Brassard
C Cham
A Daniel
C Dolhaniuk
J Fernandez de Lara
D Fraser
N Gupta
F Javed
A Lukwinski
A Neilson
A Skorenki
*B St. Martin
A Whitford

Professors Emeriti
RP Beck
D Cumming
N Demianczuk
L Honore
J Marko

Clinical Professor Emeritus
JJ Boulton

Adjunct Professors
K Hegadoren
L Hornberger
A Kozyrskij
S Tough

Associate Adjunct Professors
R Khurana
L Postovit
W Sia

Assistant Adjunct Professors
Y Fu
D Kingston

Oncology

Chair and Professor
AJB McEwan

**Associate Chair, Graduate
Studies**
A Underhill

**Assistant Chair,
Administration**
C Henderson

Experimental Oncology

Interim Director
R Godbout

Professors
R Godbout
MJ Hendzel
D Murray
ARE Shaw
J Tuszyński
M Weinfeld

Associate Professors
G Chan
MM Hitt
J Lewis
M Pasdar
L-M Postovit
DA Underhill

Adjunct Professors
DD Eisenstat
J Hugh
R Lai

Adjunct Professor Emeritus
*L Wiebe

Adjunct Associate Professors
S Baksh
*JLJ Deschenes
P Grundy
I-S Goping
S Persad

Adjunct Clinical Professor
RC Berendt

Adjunct Assistant Professors
R Fahlman
Y Fu
*R Leng

Associate Clinical Professor
R Mirzayans
Faculty Service Officer
X Sun

Professor Emeriti
C Cass
LM Pilarski
J Turner

Medical Oncology

Director and Professor

S North

Professors
AR Belch
CH Butts
JR Mackey
M Sawyer
M Smylie
K Tonkin
P Venner

Associate Professors
Q Chu
A Joy
K King
S Koski
KE Mulder
A Scarfe

Assistant Professors
M Ho
R Sangha
J Spratlin
C Venner
JWT Walker

Associate Clinical Professor
N Chua

Assistant Clinical Professors
N Basappa
S Basi
A Fontaine
S Ghosh
J Meza-Junco
J Price Hiller

Adjunct Professors
J Brandwein
*K Courneya
*LM Larratt
*DW Morrish

Adjunct Associate Professor
SJ Desai

Adjunct Assistant Professor
LD Bolster
SG Cheng
S McKillop
AC Peters
LK Saini
IS Sandhu
NY Zhu

**Adjunct Clinical Assistant
Professor**
JM Patterson

Medical Physics

Director
BG Fallone

Professors
BG Fallone
RS Sloboda

Associate Professors
N DeZanche

M MacKenzie
S Rathee
T Riauka
DM Robinson
S Steciw
B Warkentin

Assistant Professors
H-S Jans
M Larocque
K Wachowicz
A Yahya

Clinical Professors
SL Connors
GC Field
B Murray

Associate Clinical Professors
G Menon
H Warkentin

Assistant Clinical Professors
SSC Burnett
J Hancock
B Long

Adjunct Professor
J Cunningham
Professional Service Officer
A Tessier

Oncologic Imaging

**Interim Director and
Professor**
FWuest

Professor
AJB McEwan

Associate Professor
R Schirmacher

Assistant Professor
K Gagnon

Associate Clinical Professor
P Kumar

Assistant Clinical Professor
S Sharma

Adjunct Clinical Professors
R Hennig
M Johnson

**Adjunct Associate Clinical
Professor**
D Williams

**Adjunct Assistant Clinical
Professors**
A Bistriz
B Campbell
E Hudson
M Janoski
R MacEwan
M Smerdely

Adjunct Assistant Professors
FA Buteau
T Sykes

Professional Service Officers
J Wilson
M Wuest

Professor Emeriti
S McQuarrie
J Mercer

Assistant Clinical Professors
K Chu
J Cuartero
HW Liu
E Pituskin

Assistant Clinical Professors
K Chu
J Cuartero
HW Liu
E Pituskin

Palliative Care Medicine

Acting Director and Professor
SM Watanabe

Professors
V Baracos
RL Fainsinger
C Nekolaichuk

Associate Professor
D Oneschuk

Assistant Professors
C Collie
K Fassbender

Clinical Professors
CE Cumming
S Stegglers
I de Kock

Associate Clinical Professors
P Amigo
M Mirhosseini
Y Tarumi
V Thai
G Wolch

Assistant Clinical Professors
S Burton-MacLeod
J Turner

Adjunct Professors
WD Duggleby
*KL Olson

Radiation Oncology

Director and Professor
WH Roa

Professors
D Fulton
N Jha
M Parliament
RG Pearcey

Associate Professors
A Fairchild
K Joseph
A Murtha
S Patel
N Pervez
R Scrimger
N Usmani
D Yee

Assistant Professors
J Amanie
B Danielson
Z Gabos
F Huang
E Wiebe

Adjunct Associate Professor
B Abdulkarim

Clinical Professors
S Chafe
T Nijjar
D Severin
K Tankel

Assistant Clinical Professors
K Chu
J Cuartero
HW Liu
E Pituskin

Adjunct Associate Professor
*BE Krause

Adjunct Assistant Professors
ML McNeely
E Pituskin

Professor Emeritus
RC Urtasun

Radiation Therapy Program

Director
S Fawcett

Associate Professors
J Sharpe
B Tomanek

Assistant Professor
K Baker
B Debenham

A Gamper

Faculty Service Officers

B Chwyl
J Dewhurst
J Duquette
H Gaunt
L Grose
J Middleton
C Palmaria
K Rans

Ophthalmology and Visual Sciences**Chair and Professor**

KF Damji

Professors

GT Drummond
OJ Lehmann
IM MacDonald

Associate Professors

CJ Rudnisky
Y Sauve
E Weis

Clinical Professor

FL Leong-Sit

Associate Clinical Professors

SM Chan
D Climenhaga
H Climenhaga
MC Edwards
M Greve
B Hinz
EJ Hodges
RLC Johnson
M Kutzner
JR Lewis
EA Macdonald
EJ Rudnisky
M Tennant
LM Uniat

Assistant Clinical Professors

CF Baker
D Cote
M Dorey
KR Hennig
J Heston
J Hodges
K Kassiri
GB Kaye
J Leong-Sit
DY Mah
N Pollock
E Rech
R Riyaz
CE Solarte

R Somani

Clinical Lecturers

J Badilla
H Burnett
A Chan
SC Chan
S Chen
K Gill
M Rasouli
M Scambler
B Wakeman

Professors Emeriti

WG Pearce
HT Wyatt

Pediatrics**Chair and Professor**

S Gilmour
Assistant Chair, Administration
M Davison

Professors

I Adatia
K Aziz
P Cheung

JY Coe

RM Couch
J Dyck
JR Dyck
DD Eisenstat
JE Ellsworth
*L Fljegel
L Fiorillo
S Forgie
*D Gilchrist
S Gilmour
M Gowrishankar
P Grundy
*G Hnatko
L Hornberger
M Kantoch
*T Klassen
A Kozyrskyj
P Kantor
*T Lacaze
R Lehner
GD Lopaschuk
*E Lou
P Massicotte
*M Michalak
L Mitchell
AR Osornio Vargas
H Rajani
J Robinson
R Rosychuk
R Schulz
*CM Sergi
B Sinclair
*M Somerville
K Stobart
*O Suchowersky
*B Thebaud
*K Todd
W Vaudry
S Vohra
MJ Watt
L West
J Wong
J Yager
V Yiu
L Zwaigenbaum

Associate Professors

*D Adamko
T Alexander
S Ali
I Amirav
J Andersen
D Andrews
S Baksh
*S Bamforth
*L Bajzar
G Ball
L Baydala
C Birkman
*A Chan
B Clark
IW Craig
D Davies
L Dibden
*BD Dick
C Dosman
J Duff
*H El-Hakim
K Forbes
R Girgis
R Goetz
A Haqq
D Hartfield
L Hartling
H Huynh
M Jetha
C Joynt
H Kolski
M Lang
B Lee
*NJ Leonard
M Lewis
A Mackie
C Majaesic
P Mandhane

A Newton
L Mitchell
*DB Nicholas
R Persad
S Persad
M Pinsk
C Rassmussen
*G Rempel
L Richer
*DW Spady
E Tham
J Turner
T Turner
*P Wales
J Walton
RB Wright
J Zap
D Zhang

Assistant Professors

D Allain
R Arent
J Atallah
*M Bauman
M Belletruitti
*R Blackadar
F Bolduc
A Bruce
*C Bukutu
M Carroll
T Colen
J Conway
S Curtis
A Dixon
*K Dong
*H El-Hakim
M Hawkes
H Jou
*S Jain-Ghai
NS Khoo
*S Jain-Ghai
NS Khoo
MacLean
S McKillop
C Morgan
F Morneau-Jacob
M Prowse
*V Raso
E Rosolowsky
D Rumsey
L Ryerson
G Schmolzer
J Silverman
L Sonnenberg
S Urschel
M van Manen
A Wan
E Wine
Y Yanishevsky

Clinical Professors

KB Anderson
G Andrew
C Baxter
I Buka
P Byrne
A Conradi
A de Caen
S Desai
*CA Hapchyn
A Joffi
RR Moriarty
A Peliowski
E Phillipos
L Sim
J Smallhorn
J Van Aerde
B Wilson

Associate Clinical Professors

F Ajamian
N Anton
S Carr
I Dhunoo
S Escoredo
S Galante
D Garros
L Hendson

A Janicka
M Kumar
C Kyriakides
K Lee
L Lequier
M Levinsky
P Lidman
JE Lopatka
A Malinowska
D McConnell
LF McGonigle
K Meier
PM Piersie
EM Rabinovitch
MA Ramji
K Ramlall
J Rutledge
W Sevcik
R Sharon
J Tjebkhan
T Vander Leek
L Wincott
M Witmans
KS Wong
SK Wong
PC Zuberbuhler

Assistant Clinical Professors

J Ackland-Snow
V Anand
A Antiniuk
M Antunes
G Apostol
R Arent
D Berry
C Bester
E Bolster
I Chapados
R Chatur
T Chibuk
A Currie
M Davidson
A Elswiniya
M Enarson
P Enarson
S Ensenat
A Estey
J Foulds
B Frohlich
S Gallagher
G Garcia Guerra
EW Harris
M Harvey-Blankenship
R Hutchings
M Kundra
V Kumaran
S Lappa
J Lee
RP Lemke
H Leonard
B Malinowski
T Masterson
B McCook
AN Mian
F Mohammed
M Montgomery
*R Mueller
J Pei
E Persson
D Pon
M Qureshi
D Radisic
A Rahman
A Reichert
D Roseman
N Saini
M Shaik
M Spavor
K Stevens
J Stevens
G Sukhrani
WA Szymanski
J Teoh
D Thomas
J Toye
A Tse-Chang
K Waters

L Zorzela

Clinical Lecturers

G Al-Naami
M Bowman
J Brar
M Chan
J Drager
H Dreise
A Dubov
E Estrabillo
E Feidrich
J Kassiri
T Kherani
K Kulkarni
T Kutnikoff
T Ladha
S Nakhuda
G Schmolzer
C Slatter

Faculty Service Officers

M Ansarian
L Evered
K Goulden
B Islam
J Patidar
M Oliva
R Tang-Wai
M Zhang

Professors Emeriti

J Akabutu
C Baxter
NF Duncan
E Gauk
J Godel
*LC Grisdale
F Harley
AB Jones
EE McCoy
PM Olley
HF Pabst
CMT Robertson

Pharmacology**Chair and Professor**

JR Hammond

Professors

*P-Y Cheung
AS Clanachan
WF Colmers
*JRB Dyck
PE Light
*GD Lopaschuk
*IL Martin
*QJ Pittman
E Posse de Chaves
R Schulz
PA Smith
AM-W Tse
FW-Y Tse
*M Zaugg

Associate Professors

*B Kerr
H Kurata
A Holt
AL Hudson
PE MacDonald
F Plane
*JM Seubert
S Sipione

Assistant Professors

*S Bourque
B Hubbard
*PK Jurasz

Professors Emeriti

TM Allen
GB Frank
WP Gati
RM Henderson
AAC Yeung

Clinical Professor Emeritus

EE Daniel
Faculty Service Officer

M Davies

Physiology**Chair and Professor**

JD Young

Professors

*D Ali
K Ballanyi
*B Ballermann
*GB Braam
*JR Casey
*CB Chan
X-Z Chen
*ST Davidge
*C Dickson
GD Funk
JJ Greer
S Harvey
*LW Kline
*RZ Lewanczuk
*BF Mitchell
PV Nguyen
*DM Olson
A Prochazka

Associate Professors

*RT Alexander
E Cordat
EM Leslie
*DH Freed
S Gosgnach
Z Kassiri
*G Oudit
*Y Sauve

Assistant Professors

R Clugston
S Pagliardini
*E Wine
J Yue

Professors Emeriti

SC Barton
CG Benishin
CI Cheeseman
M Duszyk
AKC Ho
SE Jacobs
E Karpinski
KG Pearson
EJ Sanders
RB Stein

Faculty Service Officers

S Das (FSO I - Assistant Teaching Professor)
JR Mitchell (FSO I - Assistant Teaching Professor)
K Smith (FSO I - Assistant Teaching Professor)

Psychiatry**Chair and Professor**

X Li
Administrative Officer
M Gartner

Professors

K Aitchison
G Baker
L Breault
NJ Coupland
SM Dursun
AJ Greenshaw
S Kar
J-M LeMelledo
PH Silverstone
KG Todd

Associate Professors

*B Dick
W Friend
E Fujiwara
L Stovel
I Winship

Assistant Professors

A Choy

N Mitchell

Clinical Professors

JL Banasch
J Beach
M Blackman
CA Blashko
AB Bremness
C Buchholz
PE Carr
AM Carroll
P Chokka
P Chue
KM Collinson
JM Dewart
R Drebit
J Eustace
P Flor-Henry
KD Gendemann
A Gordon
RA Gurke
CA Hapchyn
RE Hibbard
AS Joyce
L Kagan
M McCallum
JG O'Kelly
JW Osinchuk
L Pawluk
HM Piktel
SE Purdon
J Rodgers
JS Rosie
PM Segal
D Shih
T Snyder
L Studer
LB Warneke
PJ White

Associate Clinical Professors

V Agyapong
D Block
O Cadsky
L Calhoun
C Carter
WT Chimich
J Chiu
M Demas
RJ Dyck
C Els
CK Froelich
DR Ginter
DR Guinhawa
O Hodlevsky
A Khullar
M Levinsky
WA McCay
P Mills
BR Mirtle
C Moreau
NJ Mulholland
V Newton
R Oswald
MB Parsons
LJ Phillips
BS Sanderman
JR Scott
Y Shapiro
B Stich
M Swanson
DYW Wong
N Youssef

Assistant Clinical Professors

G Ahmed
M Astorga
K Balachandra
R Brown
A Cojocar
M Cummins
O Din
S Dobrofsky
LP Ennis
N Fisher
V Gupta
G Hetherington

J Hinton
ND John
G Kelly
K Kirdeikis
K Lawless
A Leung
D Li
J Long
E McKaigney
DW Meakins
J Perez-Parada
CL Phillips
A Poukhovski
T Prior
A Salmon
G Schoepp
W Smart
L Smit
B Stonehocker

Clinical Lecturers

V Agyapong
S Aldandashi
M Al-Ghamdi
M Alikouzehgaran
M Astorga
F Bahrey
D Bailey
E Boffa
L Burbach
J Carr
C Chrenek
J Chu
C Czarneci
K Devoulyte
SC Duncan
L Elwell
W Fewer
SC Frank
JT Gillese
R Granger
A Haag
J Hibbard
C Hrushka
T Hugie
E Hunting
F Jahandar
I Khan
B Ko
C Kovithavongs
R LaFrance
H Lari
L Leclair
K Lefko-Singh
K Leicht
L Litwinson
B Lorraine
N Mahil
R Coulden
O Manuwa
M Marsh
J McCAhill
D McManus
S Mitchell
C Morhaliek
K Morin
D Nahirney
L Ostolosky
R Rabeeh
D Rawani
D Read
K Redman
P Rodd
M Salsali
R Seutter
D Sinclair
P Soper
DL Spaner
N Tomy
N Toofaninejad
J Ustina
L War
H Wilkes
C Woods

Professors Emeriti
RC Bland

R Coutts
GS Hnatko
SC Newman

Adjunct Professors

R Coutts
N el-Guebaly
*KM Hegadoren
P Nguyen
C Power
B Rowe
A Shuaib
E Starveld
O Suchowersky
J Triscott
TC Wild
NJ Witt
K Wolff
J Yager

Adjunct Associate Professors

J Lind
H McKim
P Tibbo
L Urchuk
L Zwaigenbaum

Adjunct Assistant Professors

R Block
S Duggal
F Giuliani
K Goddard
C-T Lai
N Malykhin
R Marsh
H Pazderka-Robinson

Radiology and Diagnostic Imaging

Chair and Professor
RGW Lambert

Associate Chair (Education)
R Bhargava

Associate Chair (Research & Faculty Affairs)
D Emery

Diagnostic Radiology

Program Director
A Kanigan

Professors
*C Beaulieu
R Bhargava
*P Boulanger
R Coulden
D Emery
*AH Walji
*AH Wilman

Associate Professors

S Dhillon
M Noga
R Owen
*R Thompson

Assistant Professors

J Abele
*T Darsaut
T Hillier
J Jaremko
E Lou
G Low

Honorary Professor

*M Grace

Clinical Professors

LJ Filipow
RC Hennig
MA Johnson
L Le
E Wiebe

Associate Clinical Professors
T Ackerman

T Alexander
W Anderson
RA Ashforth
G Askew
J Barrie
I Birchall
MK Hirji
M Hoskinson
M Hutson
S Jackson
H Jen
G Lauf
M O'Keefe
G Raymond
D Reich
WL Ritchie
K Siminoski
G Sterling
DB Vickar
RS Warshawski

Assistant Clinical Professors

S Appavoo
G Armstrong
J Baron
S Bates
S Bhutani
T Black
D Bruce
B Campbell
J Carscadden
N Cochrane
C Crawley
S Crowther
H Dhliwayo
A Duha
CG Elias
J English
J Fingard
S Greenspan
BD Guspie
B Hnatiuk
R Holub
T Horwitz
M Hudson
R Hung
P Hyde
L Jamieson
M Janicki
M Janoski
A Kanigan
WG Keenan
S Kitay
J Korzan
T Kotylak
P Kozairz
A Kumar
A Kwan
N Lakis
K Lee
C Lywood
B Ling
C Lummer
R MacEwan
V Makis
S Manji
NE Maslo
R McEwen
I McKerlie
D McNally
S Naik
E Ngan
E Niven
D Olson
L Paskar
V Patel
R Pawluk
R Pereira
EJ Preville
KN Puznak
A Raja
B Rawat
R Receiver
J Rempel
A Rouget
R Samji

P Sarlieve
M Scott
D Shamchuk
H Shein
N Shergill
R Sherlock
H Sidhu
A Singh
M Smerdely
P Spiers
W Sugars
JF Swersky
AS Tang
B Taylor
C Torbiak
R Turner
G Van der Merwe
D Williams
C Winter
S Winters
T Yeo

Clinical Lecturers

B Ahmed
W Block
W Fu
W Koberstein
F Kozin
K Leung
N Merchant
A Panu
M Pitts
K Sahi
K Samji
E Sonnex
P Sunner

Professor Emeritus
DB Russell

Nuclear Medicine

Program Director
C Winter

Assistant Professor
J Abele

Professor
*AJB McEwan

Associate Clinical Professors

M Hoskinson
H Jen
M O'Keefe
RS Warshawski

Assistant Clinical Professors

B Ling
AS Tang
B Taylor
C Winter

Surgery**Chair and Professor**

DM Hedden
Divisional Director, Surgical Research
Colin Anderson
Senior Director, Undergraduate Education
J White
Senior Director, Postgraduate Education
E Wright
Director, Graduate Studies
T Churchill
Health Informatics, Innovation and Technology
T Winton
Assistant Chair, Administration
D Tittley

Anatomy

Director and Associate Professor
DJ Livy

Professor
AH Walji

Associate Professors

P Lemelin
D Livy
C Webber

Assistant Professor

J Hocking

Adjunct Associate Professor

*L Satkunam

Professor Emeriti

DA Begg
K McFadden

Cardiac Surgery

Director and Clinical Professor
D Ross

Associate Professors

D Freed (Special Continuing)
S Meyer

Assistant Professor

J Nagendran

Clinical Professors

JC Mullen
*IM Rebeckya
DB Ross
S Wang

Associate Clinical Professors

CR Guenther
A Khani-Hanjani
R MacArthur
DL Modry

Assistant Clinical Professors

M Al Aklabi
H Buchholz
MC Moon

Adjunct Professors

WD Chin
*DE Johnstone
*LJ West

Assistant Adjunct Professor

CM Norris

Professor Emeritus

E Gelfand

General Surgery

Director and Associate Professor
DC Williams

Professors

*DL Bigam
DW Birch
CJ de Gara
SM Hamilton
*NM Kneteman
*AMJ Shapiro

Associate Professors

K Buttenschoen
S Karmali
*T McMullen
JS White
S Widder
R Khadaroo

Assistant Professors

RJ Brisebois
K Fathimani (special continuing)
D Schiller
H Wang (special continuing)

Clinical Professors

HR Chyczij
KD Dabbs
DW Jirsch
S Kilam
*MA Meier

MH Stephens

Associate Clinical Professors

DO Adams
M Chatenay
PD Davey
*MG Evans
*A Indar
GM Lees
*AVF Sobey
EA Plewes
C Sample
WM Struck

Assistant Clinical Professors

K Alibhai
J Bayne
R Beekman
D Berg
A Borowiec
P Boora
A Cadili
D Callahan
C Ciona
T Gomes
E Haase
O Heisler
R Juta
J Kennedy
JD Matheson
P Miles
D Mok
*SA Morris
D Olson
D Paton-Gay
AVF Sobey
R St Germaine
AF Trautman
RG Turnbull
GB Winkelhaar
WJ Yakimets

Clinical Lecturers

I Ahmad
G Alhassani
J Andruchow
A Bennett
H Cox
O Farooq
GC Ibbotson
C Jadick
KR Klingbeil
N MacEachern
MA Mohamed
K Naidoo
D Reddy
MS Sabir
M Shaw
JK Stewart
M Swenia
B Tsang
N Wasey

Professors Emeriti

KL Bowes
RAL Macbeth
GW Scott
OG Thurston
WW Yakimets

Adjunct Professors

*TW Theman
P Wales
*AH Walji

Neurosurgery

Director and Associate

Clinical Professor
M Wheatley

Assistant Professors

C O'Kelly
T Darsaut
B Krushelnycky (special continuing)
T Sankar

Clinical Professors

KE Aronky

JM Findlay

Associate Clinical Professors

MM Chow
RJ Fox
V Mehta
DE Steinke
BM Wheatley

Assistant Clinical Professors

RW Broad
AKY Nataraj

Professor Emeriti

KC Petruk
BKA Weir

Orthopaedic Surgery

Director and Associate Clinical Professor

E Masson

Professor

*DM Hedden
NM Jomha

Associate Professors

*SK Dulai
A Adesida

Assistant Professors

E Lou (special continuing)
M Menon

Clinical Professor

*MJ Moreau

Associate Clinical Professors

RA Balyk
JG Cinats
D Dick
H Jiang
PMK Leung
J Mahood
E Masson
GJ O'Connor
DD Otto
GG Russell
DW Weber

Assistant Clinical Professors

GD Arnett
J Bergman
MJ Bouhane
R Chan
RRM Glasgow
GR Goplen
RL Henderson
E Huang
LE Hunka
FB Kortbeek
A Lalani
GJ Lavoie
MV Lavoie
A Manolescu
JF McMillan
PJ Paul
A Scharfenberger
DM Sheps
RE Stiegelmar
J Toreson
C Hui
R Perlau
J Bury

Clinical Lecturers

D Durand
D Glasgow
S Kumar
M Lapner
C Panaro
B Pederson

Associate Adjunct Professors

L Beaupre
*JS Hebert
C Lebrun
WA Moussa

E Parent

Assistant Adjunct Professors

D Hill
*DJ Naidu
V Raso

Professor Emeritus

DC Reid

Otolaryngology

Director and Professor

H Seikaly

Professors

H Seikaly
J Wolfardt

Associate Professors

JR Harris
A Ho
S Nayar

*TC Uwiera

E Wright

K Ansari

M Osswald

Assistant Professors

D Cote (special continuing)
D O'Connell (special continuing)

*TC Uwiera

Y Al-Rajhi (special continuing)

Clinical Professors

CS Carter

WH Kudryk

Associate Clinical Professors

MW Allegretto
JC DiToppa

JD Keohane

R Liu

Assistant Clinical Professors

Y Al-Rajhi (special continuing)
DD Otto

H Al-Hajaj

R Seemann

Clinical Lecturers

R Chowdhury
MA Mohamed

P Nesbitt

N Rizk

Adjunct Professor

M Zhang

Pediatric Surgery

Director and Associate

Clinical Professor
MG Evans

Professor

DM Hedden

Associate Professors

I Bratu
B Dicken

SK Dulai

D Kiddoo

PD Metcalfe

*J Olson

*J Pugh

TC Uwiera

Clinical Professors

*KE Aronky
MJ Moreau

IM Rebeyka

*GH Wilkes

Associate Clinical Professors

*H El-Hakim (special continuing)
MG Evans

GM Lees

JK Mahood

JB McIvor

Assistant Clinical Professor

Y Alrajhi

Clinical Lecturers

EC Eksteen
S Southon

Plastic Surgery

Director and Associate

Professor
J Olson

Professor

EE Tredget

Assistant Professors

A Ladak (special continuing)
R Guilfoyle (special continuing)

Clinical Professors

GL Lobay
G Louie

M Morhart

GH Wilkes

Associate Clinical Professors

DD Campbell
DC Edwards

Assistant Clinical Professors

MJ Giuffre
T Riegel

J Toy

Clinical Lecturers

TF Chong
T Hayashi

LJ Korus

BM Mehlmg

P Schembri

J Wolfi

J Zhu

Professor Emeritus

JDM Alton

Adjunct Professors

L McGann
S Nagata

Assistant Adjunct Professor

K Sabri

Surgical Medical Research Institute

Director and Associate

Professor
G Rayat

Surgical Oncology

Director and Associate

Professor
T McMullen

Professors

C deGara
N Kneteman

RB Moore

H Seikaly

J Shapiro

DL Bigam

Associate Professors

J Harris
JS White

E Bedard

Assistant Professors

E Haase

Clinical Professors

KD Dabbs
G Lavoie

Adjunct Associate Professors

CA Capstick
A Schepansky

Associate Clinical Professor

CD O'Hara

Surgical Research

Director and Professor

CC Anderson

Professors

B Agrawal
CC Anderson

GS Korbutt

RV Rajotte

EE Tredget

Associate Professors

F Berry
TA Churchill

G Rayat

A Adesida

Assistant Professor

B Zheng

Faculty Services Officer

LF Zhu

Professors Emeriti

KP Kowalewski

GW Scott

DC Secord

Adjunct Professors

P Cheung

MP Mintchev

*RW Yatscoff

LJ West

Thoracic Surgery

Director and Associate

Professor
E Bedard

Associate Professors

E Bedard

K Stewart

TL Winton

Assistant Professor

B Laing (special continuing)

Assistant Clinical Professors

S Johnson

A Valji

Transplant Surgery

Director and Professor

NM Kneteman

Professors

D Bigam

NM Kneteman

J Shapiro

Assistant Professor

B Laing (special continuing)

Urological Surgery

Director and Associate

Professor
GT Todd

Professor

RB Moore

Associate Professors

NE Jacobsen

*D Kiddoo

*PD Metcalfe

KF Rourke

T Schuler

Assistant Professor

A Fairey (special continuing)

Clinical Professor

MP Chetner

Associate Clinical Professors

HJ Evans

GJ Gray

Assistant Clinical Professors

DJ Bochinski

EP Estey

M Hobart

MN Weisler

TA Wollin

Clinical Lecturer

B St Martin

S De

Professors Emeritus

MS McPhee

Faculty Divisions

Community Engagement

Associate Dean and Associate

Professor
J Konkin

Program Directors

Associate Professor and

Director, Community

Engaged Research

L Keenan

Director, Global Health

(Vacant)

Director, Indigenous Health

(Vacant)

Director, Inner City Health

(Vacant)

Associate Professor and

Director, Rural and Regional

Health

F Janke

Adjunct Professors

K Aziz

M Frishkopf

P Hamilton

D Moores

K Solez

K Stobart

R Turnell

D Zakus

Adjunct Associate Professors

L Baydala

V Caine

K Dong

F Janke

L Keenan

D Myhre

D Nichols

G Renwick

M Sharifzadeh-Amin

Adjunct Assistant Professors

R Ahmed

J Dacks

M Chan

Adjunct Assistant Clinical

Professor

M Caffaro

M Jacka (special continuing)
W Sliagl (special continuing)

Assistant Professors
S van Diepen (special continuing)
R Chowdhury (special continuing)

Adjunct Professor
*E Tredget

Adjunct Associate Professors
*L Cheung
*S Widder

Adjunct Assistant Professors
*R Brisebois
*C Karvellas
*R Khadaroo

Clinical Professors
*N Gibson
RG Johnston
M Meier
*MH Stephens

Associate Clinical Professors
J Davidow
D Djogovic
*S Duggan
M Ewanchuk
M Heule
*C Johnston
W Murtha
G Singh
A Sobey
DE Stollery
D Townsend

Assistant Clinical Professors
M Ballerman
M Henry
D Hudson
A Liu
S Marcushamer
D Markland
*JD Matheson
S Norris
*D Paton-Gay
E Rokosh
A Romanovsky
A Shustack
*M Simmonds
G Suen
C Torok-Both
M Zibdawi

Clinical Lecturers
*P Engels

Health Sciences Laboratory Animal Services

Director
N Bosvik

Faculty Service Officers
N Bosvik
D Domahidi
RE Uwiera
M Dziwenka

John Dossetor Health Ethics Centre

**Interim Director and Clinical
Professor**
*P Byrne

Assistant Professor
*M van Manen

Adjunct Professors
*P Brindley
D Truscott

Associate Adjunct Professors
T Bailey

*P Brett-MacLean
*D Davies
*D Sellman
L Shanner

Clinical Professor
*AR Joffe

Associate Clinical Professors
*C Els
*D Garros

Assistant Adjunct Professors
I Iyioha
H Janz
D Kieser
D Kuyk
A Mardon
S Phelan
*S Stahlke

Assistant Clinical Professors
*B Leier
*C Mack
*G Goldsand

Clinical Lecturers
J Gilchrist
C Nolan
V Seavilleklein
E Wasylenko

Professors Emeriti
W Austin
V Bergum
*JB Dossetor
RJ Sobsey

University Centre for Neuroscience

Director and Professor
J Greer

Professors
*N Ashworth
*GB Baker
*K Ballanyi
*C Beaulieu
*D Bennett
*R Camicioli
*F Colbourne
*WF Colmers
*RA Dixon
*S Dursan
*K Fouad
*GD Funk
*T Gordon
*AJ Greenshaw
*JJ Greer

*S Harvey
*K Hegadoren
*JH Jhamandas
*S Kar
*BKV Maraj
*WR Martin
*J Misiaszek
*P Nguyen
*KG Pearson
*D Pilgrim
*C Power
*A Prochazka
*A Shuaib
*P Silverstone
*PA Smith
*D Treit
*A Tse
*F Tse
*R Wevrick
*D Wylie
*J Yager
*J Yang

Associate Professors
*DW Ali
*CA Boliek
*KM Chan
*D Collins
*B Dick
*CT Dickson

*M Gorassini
*A Hudson
*P Hurd
*S Kaloira
*B Kerr
*V Mushahwar
*E Posse de Chaves
*CT Putman
*Z Siddiqi
*A Waskiewicz
*CF Westbury

Assistant Professors
*T Allison
*F Bolduc
*K Butcher
*J Caplan
*J Cummine
*E Fujiwara
*F Giuliani
*S Gosgnach
*K Jones
*B Kerr
*N Malykhin
*C Rasmussen
*Y Sauve
*A Singhal
*S Sipione
*C Sturdy
*C Webber
*S Wiebe
*I Winship

Adjunct Professors
*JC Lind
*J Norton

Adjunct Assistant Professor
*F Dolcos

Professors Emeriti
*AR Dobbs
*TL Krukoff
*S Kumar
*A Spencer
*RB Stein

Faculty Service Officer
*C Hanstock

Centres/Institutes
www.med.ualberta.ca/
departments

Additional Members of Faculty Council

President and Vice-Chancellor
D Turpin, CM, PhD, LLD, FRSC

Representatives

Registrar, University of Alberta
Registrar, Alberta Dental Association
Registrar, Alberta Dental Hygienist Association
One representative, Cross Cancer Institute
One representative, Alberta Medical Association
One representative, Alberta Innovates
One representative, College of Physicians and Surgeons of Alberta
Three representatives, Alberta Health Services (one referral hospital; one from Community Health Services; one from Public Health)
One representative, AHS Mental Health and Addictions Services
Dean, Faculty of Nursing
Dean, Faculty of Pharmacy and Pharmaceutical Services
Dean, Faculty of Rehabilitation

Medicine
Dean, Faculty of Physical Education and Recreation
One representative, Faculty of Science
One medical librarian

General Information

The Faculty of Medicine of the University of Alberta was established in 1913 and until 1922 conducted a three-year undergraduate medical program in the basic medical sciences.

In 1923, a full program of clinical instruction began, and the first Doctor of Medicine (MD) degrees were awarded in 1925.

Dental education was instituted at the University of Alberta in 1917 in the School of Dentistry under the Faculty of Medicine. The first full degree program was offered in 1923, and the first class graduated in 1927. The School became the Faculty of Dentistry in 1944. Dental Auxiliary training was instituted in 1961. In 1962, the School of Dental Hygiene came into being. A program of graduate studies was formally approved in 1962.

In 1996, the Faculty of Dentistry was merged with the Faculty of Medicine to become the Faculty of Medicine and Dentistry.

Universal Precautions

All students attending the University of Alberta shall use Universal Precautions for blood, body fluids, and tissues at all times within the educational setting to lessen their risk of acquiring or transmitting bloodborne infection from/to another person. These precautions entail the avoidance of direct contact with the blood, blood products, tissues and other body fluids of another person. The Faculty of Medicine and Dentistry conducts the following programs:

Medical Programs

1. A fully accredited four-year program leading to the degree of Doctor of Medicine. At least two pre-medical years at university are required before admission to this program.
2. A program whereby students in the MD program who fulfil specified requirements in research may receive the degree of Doctor of Medicine "with Special Training in Research."
3. A four-year program leading to the degree of Bachelor of Science in Medical Laboratory Science, which may be entered after a preprofessional year.
4. A program whereby students in Medical Laboratory Science who fulfil specified requirements in research may receive the degree of Bachelor of Science in Medical Laboratory Science "with Honors in Research."
5. A program whereby students in the MD Program who fulfil specified requirements may be awarded the Bachelor of Medical Science degree at the conclusion of their second year in the MD program.
6. A program whereby students in the Radiation Therapy Program who fulfil specified requirements may receive the degree of Bachelor of Science in Radiation Therapy.
7. At the graduate level, programs leading to the degree of Master of Science or Doctor of Philosophy. Also programs leading to the degree of Master of Public Health (formerly, Master of Health Service Administration) or the Diploma in Health Service Administration.
8. Programs leading to accreditation by the College of Family Physicians of Canada.
9. Programs leading to eligibility for specialist qualification, in all clinical specialties, by the Royal College of Physicians and Surgeons of Canada are offered in cooperation with affiliated hospitals.
10. An extensive program of continuing medical education for physicians practising in northern Alberta.
11. A program whereby students obtain both the MD degree and PhD degree to prepare them for a career as a clinician-scientist. See Programs of Study for details of programs of study.
12. A program of combined study which permits highly qualified students to earn both the MD and MBA degrees within five years.

Dental and Dental Hygiene Programs

1. An accredited four-year program leading to the degree of Doctor of Dental Surgery (DDS). At least two pre-dental years at university are required before admission to this program.
2. A Bachelor of Medical Science degree that students registered in the DDS program may apply for after successfully completing the first two years of the DDS program.

3. A two-year Advanced Placement program leading to a degree of Doctor of Dental Surgery (DDS). Applicants must possess a dental degree from a dental program recognized by the World Health Organization.
4. An accredited two-year program leading to the Diploma in Dental Hygiene. One pre-dental hygiene year at the postsecondary level is required before admission to this program.
5. A BSc (Dental Hygiene Specialization) degree which is direct entry upon successful completion of the University of Alberta Dental Hygiene Diploma Program.
6. A BSc (Dental Hygiene Specialization) post-diploma degree completion program. Primary requirements are completion of ★30 postsecondary courses and successful completion of an accredited Canadian or international dental hygiene diploma program.
7. MSc and PhD degrees in Medical Sciences (Oral Biology, Dentistry and Dental Hygiene).
8. MSc and PhD degrees and certificate in Medical Sciences (Orthodontics).
9. The Department of Dentistry sponsors a wide variety of continuing dental education opportunities throughout the year through the Continuing Dental Education program. Didactic, clinical and laboratory courses are offered both on campus and occasionally at other sites within the province. Local and visiting speakers of national and international reputation provide continuing education of a high quality. See Programs of Study for details of programs of study.

Department of Dentistry Objectives

1. To provide an academic and intellectual milieu in a university setting that facilitates all aspects of education and research in dentistry and allied health and scientific fields by
 - a. To contribute to and incorporate the advancement of knowledge in dentistry and allied fields by doing research, publishing research papers, and communicating and interacting with
 - b. Other health sciences and other disciplines of the University to promote comprehensive health care;
 - c. The dental profession, dental auxiliaries, auxiliary-training programs, and the community to promote oral health; and
4. Basic and clinical science organizations and granting agencies to promote disciplinary and interdisciplinary research.
5. To deliver undergraduate, postgraduate and graduate oral health education to prepare students to meet the challenges of rapid knowledge and technology advancements, changing demographics, shifting oral health priorities and globalization.
 - a. Attract, select, and then motivate the most suitable and well-qualified students who have the ability to acquire the education and training for a professional and/or academic career;
 - b. Maintain a dentistry and dental hygiene curriculum that integrates basic medical and dental sciences, behavior and social sciences, dental clinical sciences, community and preventive dentistry, hospital dentistry, and practice management;
 - c. Incorporate recent concepts, materials, techniques, advances, and research in all areas; and reflect the existing and projected provincial, national, and international oral health needs;
 - d. Maintain an education program that allows for the smooth transition from graduation to practice and ensures that students are competent to practise efficiently and responsibly; and
 - e. Graduate students who are competent to assume roles of leadership and service in their professions and communities.
6. To provide the opportunity and stimulus for continued learning through postgraduate, graduate, research, and continuing education programs.
7. To serve as a partner with the private-practice community, community health centres and hospital clinics to address the problem of some groups having less access to care - including those with specific health care needs, low-income groups, under-represented minorities and those who live in underserved rural and urban communities.

Affiliated Hospitals and Institutions

Affiliated Hospitals

The Faculty of Medicine and Dentistry, University of Alberta, conducts its undergraduate, postgraduate and continuing clinical education activities through affiliation agreements and/or special arrangements with Alberta Health Services. The Faculty is located in the Walter C Mackenzie Health Sciences Centre (which includes the University of Alberta Hospitals), the Heritage Medical Research Centre, the Medical Sciences, Clinical Sciences, and Edmonton Clinic Health Academy buildings, Li Ka Shing Centre for Health Research Innovation, the Katz Group - Rexall Centre for Pharmacy and Research, the Zeidler Ledcor Centre and the Cross Cancer Institute and the Kaye Edmonton Clinic.

Family Medicine Rural Teaching Sites

The Department of Family Medicine engages over 33 rural communities in undergraduate and postgraduate education initiatives.

Northern Health Services Program

Through an affiliation with the Inuvik Health Board, a regular rotation of clinical faculty, residents, and elective students to Inuvik areas (Mackenzie Area Ambulatory Program) is maintained.

University of Alberta Family Medicine Centres

Ambulatory care facilities, specifically designed for undergraduate and postgraduate education in family practice, are located at the Grey Nuns and Misericordia Community Hospitals, the Northeast Community Health Centre and the Royal Alexandra Hospital. These "Family Medicine Centres" allow medical and other health science students to participate in providing comprehensive and continuing health care to a representative section of the community under the supervision of academic family physicians.

University of Alberta Surgical-Medical Research Institute

The University of Alberta Surgical-Medical Research Institute (SMRI) is a multi-user facility that provides laboratory space and equipment for research activities of research investigators and fellows in the Faculty of Medicine and Dentistry in the field of experimental surgery and medicine. Facilities include rooms suitable for operating on large and small animals, a biochemistry and histology laboratory, and the Medicine/Dentistry Electron Microscopy Unit, located in the Institute. In addition to research activities, the SMRI provides major teaching facilities for surgical residents in training and for core training (surgical skills) for postgraduate Year 1, postgraduate Year 2, graduate, and summer students. The surgical facilities are also used for running continuing medical education courses for medical and paramedical practitioners to study the latest innovations in medicine.

University of Alberta Satellite Dental Clinics

The Satellite Clinics in northern Alberta provide an educational experience for senior Dentistry and Dental Hygiene students while delivering care to patients in remote areas. This program is supported by Alberta Health Services.

Cross Cancer Institute

The Cross Cancer Institute is a tertiary cancer facility operated by Alberta Health Services (AHS) (the provincial health authority for cancer) that provides cancer services for northern Alberta and houses the Department of Oncology. The AHS and the University of Alberta conducts its cancer research and training programs through an affiliation agreement.

Tom Baker Cancer Centre

The Tom Baker Cancer Centre is a tertiary cancer facility operated by Alberta Health Services (AHS) (the provincial health authority for cancer) in Calgary that provides cancer services for southern Alberta and houses the Department of Oncology. The AHS and the University of Calgary conducts its cancer research and training programs through an affiliation agreement.

Registration and Licensing

DDS Degree

The Department of Dentistry of the University is accredited by the Commission on Dental Accreditation of Canada.

Regulations regarding the practice of dentistry in any other province in Canada may be obtained by writing to the dental registrar of that province. Contact information is available from the Canadian Dental Association (www.cda-adc.ca).

Senior students of dental programs approved by the Commission on Dental Accreditation of Canada must write the National Dental Examining Board examinations during their final year. Successful completion of these examinations is required for licensure.

Graduates are also eligible to write licensing examinations in most of the states in the United States and the examinations of the National Board of Dental Examiners of the American Dental Association.

The Doctor of Dental Surgery (DDS) degree and the Doctor of Dental Medicine (DMD) degree (granted by some Canadian and United States universities) are equivalent degrees.

Dental Hygiene Diploma/Bachelor of Science (Dental Hygiene Specialization)

A diploma/Bachelor of Science (Dental Hygiene Specialization) degree does not, in itself, confer the right to practise. A dental hygienist desiring to practise dental hygiene in Canada should consult the appropriate provincial licensing body. Contact information is available from the Canadian Dental Hygienists Association (www.cdha.ca).

Registration to Practise

The Registrar of the Alberta Dental Association and College may refuse to issue a license and/or registration certificate to practise dentistry to any applicant with a criminal record. Likewise, the College of Registered Dental Hygienists of Alberta (CRDHA) may refuse to issue a license and/or registration certificate to practise dental hygiene to any applicant with a criminal record.

BSc in Radiation Therapy

The Canadian Association of Medical Radiation Technologists (CAMRT) is the organization that provides the national certification examination and competency profile. Students are eligible to access the CAMRT examination upon completion of all program requirements. Under the Alberta Health Professions Act, radiation therapists must be licensed by the regulatory college, Alberta College of Medical Diagnostic and Therapeutic Technologists (ACMDTT) to practice in Alberta. The ACMDTT endorses the CAMRT national examination as the certifying examination.

After successful completion of the CAMRT national certification examination, graduates are eligible to access the American Registry of Radiologic Technologists' (ARRT) certification examination.

Finance

DDS Degree

Tuition fees for the program can be found in Fees Payment Guide.

Note: The figures are approximate for 2016-2017 and do not include GST; figures are subject to change without notice.

Additional Costs for DDS Students	Year 1	Year 2
Electronic Textbook	5,200	0
Equipment & Instrumentation Rental	7,500	9,800
Dental Students Association	75	75
	Year 3	Year 4
Electronic Textbook	0	0
Equipment Rental	20,500	9,600
Dental Students Association	75	75
National Dental Examining Board (refer to www.ndeb.ca)		N/A

Dental Hygiene Diploma

Tuition fees for the program can be found in Fees Payment Guide.

Note: The figures are approximate for 2016-2017 and do not include GST; figures are subject to change without notice.

Additional Costs for DH Students	Year 2	Year 3
Electronic Textbook	3,300	0
Equipment & Instrumentation Rental	5,500	8,800
Dental Students Association	75	75
Professional Exam Fee (refer to www.ndhcb.ca)	N/A	650

Field Experiences: Students are responsible for their own transportation to and from field experiences scheduled in the Edmonton area.

Bachelor of Science (Dental Hygiene Specialization)

Tuition fees for the program can be found in Fees Payment Guide.

Note: The figures are approximate for 2016-2017 and do not include GST; figures are subject to change without notice.

Professional Standards for Students in the Faculty of Medicine and Dentistry

The University Code of Student Behaviour describes a range of nonacademic and academic offences deemed unacceptable and for which a student may be penalized. The Code of Student Behaviour, as amended from time to time is housed on the University Governance website at www.governance.ualberta.ca.

Equipment & Instrumentation Rental	500
Dental Students Association	75

Bachelor of Science (Dental Hygiene Specialization) Post Diploma Degree Completion Program

Additional Costs for Students

Books	200
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Advanced Placement Program (DDS)

Tuition fees for the program can be found in Fees Payment Guide.

Note: The figures are approximate for 2016-2017 and do not include GST; figures are subject to change without notice.

Additional Costs for Students	Year 1	Year 2
Electronic Textbook	5,200	0
Equipment & Instrumentation Rental	20,500	16,700
Dental Students Association	75	75
National Dental Examining Board (refer to www.ndeb.ca)		N/A

MD Degree

Information on fees charged to students in the MD and MSc programs is given in Registration and Fees. In addition, medical students spend approximately \$2,000 each year for books, supplies and instruments. Fourth-year medical students pay an examination fee of approximately \$700 to the Medical Council of Canada in January of their final year.

All medical students are encouraged to take the following courses: First Aid, Cardiopulmonary Resuscitation, and Advanced Cardiac Life Support. Students are responsible for the corresponding fees.

Some remuneration is presently given to final year MD students by Alberta Health, Government of Alberta.

Details of scholarships and other financial assistance for medical students are available in the Awards section of this Calendar or by contacting the MD Program Office, Admissions and Undergraduate Medical Education, 1-002 Katz Group Centre for Pharmacy and Health Research; phone (780) 492-6350.

BSc in Radiation Therapy

Tuition fees for the program can be found in Fees Payment Guide. Figures are subject to change without notice.

National Certification Examination fees are payable to the Canadian Association of Medical Radiation Technologists at www.camrt.ca/certification/international/. It is mandatory that all students are student members of the Alberta College of Medical Diagnostic and Therapeutic Technologists (ACMDTT) and must pay the student membership fee at www.acmdtt.com/Registration/StudentApplicants.aspx.

Medical and Dental Society Memberships

The Medical Students' Association (MSA) is the officially recognized organization of medical students. It provides social, informative, and cultural activities for medical students, and sponsors several important community projects. It is authorized to collect a membership fee from each student. The Association provides the following annual awards: the Outstanding Teacher Awards presented to one teacher for excellence as an educator in each year of the program; the Shaner Award presented to a graduating student for exceptional contributions to the work of the Association; the Mackenzie Award presented to a graduating student judged most proficient in clinical skills; and the Fried Award presented to the student intern who has demonstrated exceptional clinical aptitudes in Paediatrics. Some projects sponsored by the MSA and run by medical students are the University of Alberta branch of Shinerama, a program dedicated to raising money for Cystic Fibrosis research; a medical student choir; and *IATROS*, a student medical journal dedicated to publishing student articles and increasing communication between current students and alumni. Many social activities and sports events are also planned through the year.

The Medical Alumni Association is an organization of all graduates in Medicine from the University of Alberta. The Association takes an active interest in the Faculty and provides a limited loan fund for undergraduate and graduate students. In addition, the Association participates in a number of awards to students and, from time to time, finances specific projects in the Faculty. The Association meets annually in conjunction with the Alberta Medical Association meeting.

The Dental Students' Association (DSA) is registered with the Students' Union Student Groups. The DSA represents all Dentistry and Dental Hygiene students at the University. It is the DSA's responsibility to organize and communicate involvement in a number of activities by students in the Department of Dentistry. Involvement in activities of a social and professional nature include participation in activities with the greater student body on campus, inter/intra-departmental activities, and community involvement. The DSA fosters professional relations with the greater community through involvement in fund raising for a number of charitable organizations, and by providing resources and information to the community. Annual involvement in health awareness initiatives allows students to provide information and dental products to various groups, including students on campus during Health Awareness Week.

The DSA coordinates a number of formal events welcoming students to their respective professions and encouraging involvement in their professional associations. A number of less formal social events and sporting activities, including the annual curling bonspiel, are also scheduled throughout the year. The DSA works with the Faculty to present concerns and facilitate change, and together, provide students the ability to make contributions to create an enjoyable and successful program.

The Dental Alumni Association is an organization of all graduates in Dentistry from the University of Alberta. The Association takes an active interest in the Department of Dentistry of the Faculty of Medicine and Dentistry and participates in a number of awards to dental students. In addition, the Association provides limited funds to finance specific projects in the Department and honors convocating students and graduates of the silver anniversary class.

Additional Costs for Students	Year 4
Books	200

Admission and Academic Regulations

Admission

See Admission to Undergraduate Programs and General Admission Requirements for general admission requirements to the University. See Admission Requirements by Faculty for specific admission information for the DDS, Dental Hygiene, MD, BSc in Medical Laboratory Science and BSc in Radiation Therapy programs.

Combined Program for the Degrees of MD and PhD

Highly qualified students wanting to pursue a career of teaching and research in basic medical science or clinical medicine may enrol in a program of approximately six to eight years leading to the acquisition of both an MD and a PhD degree.

Students in the first year of the MD program may apply to the Combined Program. If acceptable to the appropriate department, to the Faculty of Medicine and Dentistry, and to the Faculty of Graduate Studies and Research, the student is admitted to the PhD program. Normally, on completion of two years of the MD program, the student registers in the PhD program. The time needed to complete the requirements for the PhD depends on the applicant's previous training and the nature of the research. On completion of the PhD program, the student reenters the Faculty of Medicine and Dentistry and completes the requirements for the MD degree.

Students interested in such a program may obtain further information from the Office of Research, Faculty of Medicine and Dentistry, 2-13 Heritage Medical Research Centre.

Combined Program for the Degrees of MD/MBA

The Faculty of Medicine and Dentistry and the Faculty of Business offer a program of combined study which permits highly qualified students to earn both the MD and MBA degrees in five years.

Each student must apply separately to the Faculty of Medicine and Dentistry (for admission into the MD program) and at any time in the first two years of the MD program, may apply to the Faculty of Graduate Studies and Research (for admission into the MBA program).

Academic Standing and Graduation

DDS Degree

The program leading to the DDS degree is conducted in four years (1, 2, 3 and 4) under the direction of the Faculty committees (see DDS Degree).

1. No credit will be granted for courses completed in preprofessional years and no course exemptions will be allowed.
2. The Dean, or Supervisor acting on behalf of the Dean, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions or site of practicum/clinical placement if the Dean or Supervisor has reasonable grounds to believe that this is necessary in order to protect the Public Interest. (See Practicum Intervention Policy).
3. The Council of the Faculty of Medicine and Dentistry approves the principle that the means of assessing a student's progress and determining a student's grades may vary from one course to another in accordance with the nature of the course. Factors other than examination results may be used to a variable extent by instructors in determining grades.
4. Students are advised at the beginning of each course and year of the procedures to be used in their evaluation, the determination and reporting of their grades, and the standards required by the Faculty. Students are also advised of the procedures for appeal established with the Faculty and the University. Students must satisfactorily complete all components of all courses.
5. On their official transcripts students are not ranked or assigned a numeric grade, but are designated as having passed (received credit) or failed a course.
6. **Reexaminations**
 - a. Students are allowed reexamination privileges only in courses that are failed.
 - b. The Associate Chair, Academic must approve reexaminations for students who fail two or fewer courses or components of DDS 509, DDS 529, DDS 545, or DDS 565. Students with more than two (2) failed courses or components of DDS 509, DDS 529, DDS 545, or DDS 565 in any academic year will not be allowed reexamination privileges.
 - c. The Associate Chair, Academic may allow reexamination of a didactic component of a course if a student fails the didactic component of a clinical or laboratory course but passes the clinical or laboratory portion. Reexamination is not permitted in courses that are entirely clinical or laboratory or in clinical or laboratory components of courses that include both didactic and clinical or laboratory components.
 - d. If a reexamination is approved, satisfactory completion of a remedial program may be required by the Associate Chair, Academic before the student is permitted to take the reexamination.
 - e. Students may be granted rewrites at the end of each term for failed courses within that term that meet the above requirements, but not exceeding more than two overall in an academic year. The Academic Standing Committee would be notified of all reexaminations granted.
 - f. A student who does not take a reexamination within the period of time prescribed by the Faculty will not be allowed to continue in the program.
 - g. The reexamination mark (as in the case of a deferred mark) will replace the original final exam mark.
 - h. Over the program, reexamination privileges will not exceed five reexaminations. In DDS 509, DDS 529, DDS 545, or DDS 565 all components must be successfully completed and each reexamination in a component of these courses will compose one of the five reexamination privileges.
 - i. See Reexaminations for further information regarding when reexaminations are not permitted.
7. **Academic Standing:** Final decisions regarding academic standing and promotion to the next year or graduation are made by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee.
 - a. No student may proceed to any subsequent year of the DDS program and will be required to withdraw unless they have passed all courses for that academic year.
 - b. A student who fails more than two courses in any year of the program will be required to withdraw from the program.
 - c. For promotion and graduation, students need to adhere to and meet the requirements as stated in the department's Attendance Policy.
8. **Regulations Concerning Repetition of a Year because of Academic Failure**
 - a. No student will be allowed to repeat any year of the DDS program with the exception of fourth year students who may be granted the status of "Special Category Repeating Student". See below for details.
 - b. **Special Category Repeating Student:** a student who fails to meet some requirements in the final-year of the program may be designated a Special Category repeating student. In order to be considered as a Special Category repeating student in fourth-year Dentistry, the student must
 - i. have clinical deficiencies in no more than two clinical disciplines and have been advised that the deficiency could be corrected within one term of instruction; and
 - ii. have successfully completed all written examinations in the DDS program.
Further information regarding the Special Category repeating student may be obtained from the Department Office. Students repeating the final year are not eligible for awards.
9. **Voluntary Withdrawal:** A student wanting to temporarily withdraw registration from the DDS program is required to make written application to the Associate Dean of the Faculty of Medicine and Dentistry, stating the reasons for withdrawal and the intended period of withdrawal. Readmission to the DDS program following voluntary withdrawal is based on the following:
 - a. a review, by the Faculty, of the reasons for withdrawal and of the student's academic record.
 - b. availability of a place, within quota, in the class to which the student seeks readmission. Priority is assigned in the following order:
 - i. students who have met normal promotion requirements
 - ii. Faculty-approved repeating students and students returning after voluntary withdrawal, in order of academic standing
 - c. The length of time the student interrupts studies leading to the DDS degree must not exceed two years in total.
10. **Faculty Advisor:** At the discretion of the Faculty, an advisor may be assigned to students having difficulty meeting promotion requirements. The method of assignment and role of the advisor is determined by the Faculty and/or Department.
11. All students registered in the Dentistry program are required by provincial legislation to be registered in the Educational Register of the Alberta Dental Association and College. This registration permits the practice of dentistry within the confines of the formal dental curriculum. Students in the DDS program are required to adhere to the professional code of ethics of the Alberta Dental Association and College. (Amendments to the Code of Student Behaviour occur throughout the year. The official version of the Code of Student Behaviour, as amended from time to time is housed on the University Governance website at www.governance.ualberta.ca.)
12. **Medical Testing and Immunization Requirements:** To ensure, insofar as possible, both student and patient safety, before orientation, or the Preclinical Assessment for Advanced Placement students, the Faculty requires immunization against, or proof of immunity to, poliomyelitis, diphtheria, tetanus, measles, mumps, rubella, and hepatitis B.

As well, a varicella titre test and a tuberculin skin test are required in the first year of the program and should be performed by the University of Alberta Health Centre or other appropriate medical facility.

Hepatitis B vaccination will be required. An exception will be made for those who are medically contraindicated or for those who have proof of Hepatitis B immunity. After vaccination, students will receive a test to determine if they have developed immunity. If they have not, further Hepatitis B vaccination scheduling will be determined by the University Health Centre or other appropriate medical facility. Those students who then fail to develop immunity will be counselled as to their potential risk status during training and future practice.

At all times students will follow *Standard Precautions* when there is

potential of exposure to human blood or body fluids.

Human Immunodeficiency Virus (HIV) and Hepatitis C Virus (HCV): The data indicates that transmission of the human immunodeficiency virus (HIV) and Hepatitis C Virus (HCV) from a health care worker (HCW) to a patient in a health care setting is extremely rare, although transmission from patients to a HCW is more common. Therefore, all students accepted into the Faculty of Medicine and Dentistry are encouraged to undergo HIV and HCV testing upon admission and at any time during their program when concerns about infection have arisen, but testing for HIV and HCV is not mandatory at this time.

Note: For updates on changes to medical testing and immunization refer to the Faculty Office.

- Certification in CPR (Cardiopulmonary Resuscitation) at the Basic Rescuer Level is required.

DDS Advanced Placement Program

The program leading to the DDS Advanced Placement is conducted in a minimum of two years (see DDS Advanced Placement Program, Years 3 and 4 of the DDS Program).

- No credit will be granted for courses completed prior to admission and no course exemptions will be allowed.
- The Dean, or Supervisor acting on behalf of the Dean, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions or site of practicum/clinical placement if the Dean or Supervisor has reasonable grounds to believe that this is necessary in order to protect the Public Interest. (See Practicum Intervention Policy.)
- The Council of the Faculty of Medicine and Dentistry approves the principle that the means of assessing a student's progress and determining a student's grades may vary from one course to another in accordance with the nature of the course. Factors other than examination results may be used to a variable extent by instructors in determining grades.
- Students are advised at the beginning of each course and year of the procedures to be used in their evaluation, the determination and reporting of their grades, and the standards required by the Faculty. Students are also advised of the procedures for appeal established with the Faculty and the University. Students must satisfactorily complete all components of all courses.
- On their official transcripts students are not ranked or assigned a numeric grade, but are designated as having passed (received credit) or failed a course.
- Reexaminations
 - Students are allowed reexamination privileges only in courses that are failed.
 - The Associate Chair, Academic must approve reexaminations for students who fail two or fewer courses or components of DDS 545, DDS 565. Students with more than two (2) failed courses or components of DDS 545, DDS 565 in any academic year will not be allowed reexamination privileges.
 - The Associate Chair, Academic may allow reexamination of a didactic component of a course if a student fails the didactic component of a clinical or laboratory course but passes the clinical or laboratory portion. Reexamination is not permitted in courses that are entirely clinical or laboratory, or in clinical or laboratory components of courses that include both didactic and clinical or laboratory components.
 - If a reexamination is approved, satisfactory completion of a remedial program may be required by the Associate Chair, Academic before the student is permitted to take the reexamination.
 - Students may be granted rewrites at the end of each term for failed courses within that term that meet the above requirements, but not exceeding more than two overall in an academic year. The Academic Standing Committee would be notified of all re-examinations granted.
 - A student who does not take a reexamination within the period of time prescribed by the Faculty will not be allowed to continue in the program.
 - The reexamination mark (as in the case of a deferred mark) will replace the original final exam mark.
 - See Reexaminations for further information regarding when reexaminations are not permitted.
- Academic Standing: Final decisions regarding academic standing and promotion to the next year or graduation are made by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee.

- No student may proceed to next year of the Program and will be required to withdraw unless they have passed all courses for that academic year.
 - A student who fails more than two courses in any year of the program will be required to withdraw from the program.
 - Students in the DDS Advanced Placement Program are not eligible for awards.
 - For promotion and graduation, students need to adhere to and meet the requirements as stated in the department's Attendance Policy.
- Regulations Concerning Repetition of a Year because of Academic Failure: Students in the DDS Advanced Placement Program will not be permitted to repeat a year.
 - Voluntary Withdrawal: A student in the DDS Advanced Placement Program who chooses to withdraw, forfeits the position and will not be readmitted.
 - Faculty Advisor: At the discretion of the Faculty, an advisor may be assigned to students having difficulty meeting promotion requirements. The method of assignment and role of the advisor is determined by the Faculty and/or Department.
 - All students registered in the DDS Advanced Placement Program are required by provincial legislation to be registered in the Educational Register of the Alberta Dental Association and College. This registration permits the practice of dentistry within the confines of the formal dental curriculum. Students in the program are required to adhere to the professional code of ethics of the Alberta Dental Association and College (Amendments to the Code of Student Behaviour occur throughout the year. The official version of the Code of Student Behaviour, as amended from time to time is housed on the University Governance website at www.governance.ualberta.ca).
 - Medical Testing and Immunization Requirements:** See Medical Testing and Immunization Requirements.
 - Certification in CPR (Cardiopulmonary Resuscitation) at the Basic Rescuer Level is required.

Dental Hygiene Diploma/Bachelor of Science (Dental Hygiene Specialization)

The following apply to students in the Dental Hygiene Diploma or Bachelor of Science (Dental Hygiene Specialization) programs:

- Certification in CPR (Cardiopulmonary Resuscitation) at the Health Care Provider Level is required and provided by the Program.
- Students entering the Dental Hygiene program may be granted credit for courses completed that are deemed by the Program Director, in consultation with the course coordinator and the Chair of the Department Academic Standing Committee, to be demonstrably equivalent to courses for which credit is being sought. Students carrying an academic load reduced by ★6 or more from the full course load of their academic year will not be eligible for awards.
- The Associate Dean/Department Chair, or Supervisor acting on behalf of the Associate Dean, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions or site of practicum/clinical placement if the Associate Dean or Supervisor has reasonable grounds to believe that this is necessary in order to protect the Public Interest. (See Practicum Intervention Policy.)
- The Council of the Faculty of Medicine and Dentistry approves the principle that the means of assessing a student's progress and determining a student's grades may vary from one course to another in accordance with the nature of the course. Students are advised at the beginning of each course and year of the procedures to be used in their evaluation, the determination and reporting of their grades, and the standards required by the Faculty. Students are also advised of the procedures for appeal established within the Faculty and the University. Students must satisfactorily complete all components of all courses.
- Recommendations for promotion and graduation are based on a grade of at least D in each subject and a GPA of at least 2.0.
- The notation of "With Distinction" is awarded to a graduating student in the diploma program who has obtained an average GPA of 3.5 or higher in the second and third years of the program with a minimum GPA of 3.3 in either year and no failing grades over the entire program. The notation of "With Distinction" is awarded to a graduating student registered in a minimum of ★24 in the BSc (Specialization in Dental Hygiene) program who has obtained an average GPA of 3.5 or higher in the third and fourth years of the program with a minimum GPA of 3.3 in either year and no failing grades over the entire program.
- Reexaminations:** See Reexaminations.

- a. Students are allowed reexamination privileges only in courses that are failed.
 - b. The Department of Dentistry Academic Standing Committee and the Faculty Academic Standing and Promotion Committee must approve reexaminations for students who fail one or two courses. Students with more than two failed courses in any academic year will not be allowed reexamination privileges.
 - c. The Department of Dentistry Academic Standing Committee may allow reexamination of the didactic component of a course if a student fails the didactic component of a clinical course but passes the clinical portion. Reexamination is not permitted in courses that are entirely clinical or in clinical components of courses that include both didactic and clinical components.
 - d. A student repeating a year is not allowed reexamination privileges in that year of the program.
 - e. If a reexamination is approved, satisfactory completion of a remedial program may be required by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee before the student is permitted to take the reexamination.
 - f. Students are advised that it is not possible to make a ruling regarding remediation or reexamination until all grades for a year are received and recorded.
 - g. The weight of reexamination is at least that of the final examination, but may be more (at the discretion of the Program Director in consultation with the course coordinators).
 - h. The reexamination mark (as in the case of a deferred mark) will replace the original final exam mark.
 - i. Any student who, after reexamination and/or evaluation fails to meet promotion/graduation requirements, is deemed to have failed the year.
 - j. A student who does not take a reexamination within the time period prescribed by the Faculty will not be allowed to continue in the program.
 - k. During the Dental Hygiene Diploma program, reexamination privileges will not exceed four reexaminations or a maximum of ★18. For students continuing on to the Dental Hygiene BSc program, the total reexamination privileges will not exceed five reexaminations or a maximum of ★20.
- 8. Reexamination Procedure**
- a. The Faculty of Medicine and Dentistry Academic Standing and Promotion Committee will specify by course the reexaminations required of a failed student for the purposes of meeting promotion/graduation requirements.
 - b. Second year Dental Hygiene students will take the reexamination as scheduled by June 30. Students in the third and fourth year will write after the end of the first term for first term courses, and by May 30 for second term and two term courses. Students in the Post Diploma Degree Completion Programs will write reexaminations after the applicable term. Students are advised to consult the Department.
9. Students are permitted to repeat second-year and third-year Dental Hygiene only in exceptional cases as determined by the Faculty Academic Standing and Promotion Committee. Repeating students are considered for awards, if taking a full course load.
 10. A failed student who repeats the failed year may retain credit for passed courses, other than laboratory and clinical courses, only at the discretion of the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee acting on the advice of the Department concerned. A grade of at least C+ is required for Dental Hygiene courses. Students carrying an academic load reduced by ★6 or more from the full course load of their academic year will not be eligible for awards.
 11. A Special Category repeating third-year Dental Hygiene Diploma student or Special Category repeating Dental Hygiene BSc student
 - a. has achieved a minimum GPA of 2.7 in the year requiring repetition;
 - b. has clinical/practicum deficiencies in no more than two clinical courses and is advised that the deficiency could be corrected within a four-month period of instruction; and
 - c. has successfully completed all written examinations in the Dental Hygiene program.
 12. Voluntary Withdrawal: A student wishing to temporarily withdraw registration in the Dental Hygiene Programs is required to make written application to the Dental Hygiene Program Director, stating the reasons for withdrawal. Readmission to the Dental Hygiene programs following voluntary withdrawal will be based on the following:
 - a. review, by the Faculty of the reasons for withdrawal and the student's academic record;
 - b. availability of a place, within quota, in the class to which the student is seeking readmission. Priority will be assigned in the following order:
 - i. students who have met normal promotion requirements.
 - ii. Faculty approved repeating students and students returning after voluntary withdrawal, in order of academic standing.
 - c. The length of time the student interrupts studies leading to the Dental Hygiene Diploma or Bachelor of Science (Dental Hygiene Specialization) programs must not exceed two years in total.
 13. Faculty Advisor: At the discretion of the Faculty, a Faculty advisor may be assigned to students having difficulty meeting promotion requirements. The method of assignment and the role of the Faculty advisor is determined by the Faculty.
 14. **Medical Testing and Immunization Requirements:** See Medical Testing and Immunization Requirements.

MD Program

The program leading to the MD degree is conducted in four Years (1, 2, 3 and 4), under the direction of the Faculty committees. (See MD Degree.)

1. No credit will be granted for courses completed in preprofessional years and no course exemptions will be allowed.
2. The Dean, or Supervisor acting on behalf of the Dean, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions or site of practicum/clinical placement if the Dean or Supervisor has reasonable grounds to believe that this is necessary in order to protect the Public Interest. (See Practicum Intervention Policy.)
3. The Council of the Faculty of Medicine and Dentistry approves the principle that the means of assessing a student's progress and determining a student's grades may vary from one course to another according to the nature of the course. Factors other than examination results may be used to a variable extent by instructors in determining grades, but students are informed at the beginning of the course how grades are to be determined.
4. Students are advised at the beginning of each course, and year of the attendance requirements of the procedures to be used in their evaluation, the determination and reporting of their grades, and the standards required by the Faculty and the University. Students who are absent for more than two days in any course in which attendance is compulsory will not be given credit for that course and will be asked to repeat the course. Students must satisfactorily complete all components of a course to receive a passing grade, irrespective of the overall mark. Students must satisfactorily complete all components of all courses.
 - a. All students enrolled in the MD program are bound by and shall comply with the Professional Code of Ethics governing the profession and practice of medicine. The Professional Code of Ethics refers to all relevant professional codes and practice standards for medical doctors including:
 - i. Code of Applicant Behaviour
 - ii. Canadian Medical Association Code of Ethics
 - iii. College of Physicians and Surgeons of Alberta Code of Conduct
 - iv. Professional Standards for Students in the Faculty of Medicine and Dentistry
 - v. Student Pledge of Conduct
 - vi. Faculty Code of Conduct
 - b. Students are held accountable to the Code of Student Behaviour and should be familiar with it. (See Professional Standards for Students in the Faculty of Medicine and Dentistry)
 - c. Thereinafter, any reference to students' academic performance will encompass the adherence to the Professional Code of Ethics.
5. Comprehensive Examinations:
 - a. At the end of second year, students take a preclinical comprehensive examination (denoted as MED 520) covering material presented in the first two years of the program.
 - b. After completing year three requirements, students must successfully complete an objective structured clinical examination (OSCE) as the first component of MED 540, comprehensive examination. This first exam covers material presented in the first three years of the program. At the end of fourth year, students will then be required to successfully complete the second component of MED 540 comprehensive

examination by completing a knowledge-based assessment. This exam will cover material presented in all four years of the program. All other program requirements must be successfully completed in order to be eligible to take the second examination knowledge-based assessment.

- c. Students must pass the above comprehensive examination(s) before being promoted to the next academic year (MED 520) or allowed to graduate (MED 540).
6. Students are not ranked or assigned a numeric grade, but are designated as having passed (received credit) or failed a course.
7. **Reexaminations**
 - a. A student will not be granted reexamination privileges if the student has passed the course/clerkship.
 - b. A student repeating a year is not allowed reexamination privileges in that year.
 - c. Students are advised that reexamination may not be granted until all grades for the academic year are received and recorded.
 - d. If the student has not yet been granted a previous reexamination in the current academic year, reexamination privilege may be granted at the discretion of the Course/Clerkship Coordinator in consultation with the Associate Dean, MD Program.
 - e. If reexamination is not granted by the Course/Clerkship Coordinator, the student will be brought to the appropriate Academic Standing Committee where reexamination may be considered.
 - f. If the student has already been granted reexamination privileges in other courses/clerkships in the current academic year, reexamination may only be granted by the appropriate Academic Standing Committee after student performance from the entire academic year is considered.
 - g. If a reexamination is granted, the reexamination mark will replace the original final exam mark (as in the case of a deferred mark).
 - h. If a reexamination is granted, satisfactory completion of a remedial program may be required before the student is permitted to take the reexamination.
 - i. Reexamination of MED 540 Comprehensive Examination: Students who fail this comprehensive examination may be granted a reexamination. Only the Associate Dean, MD Program may grant this reexamination.
 - j. A student who does not take a reexamination within the period of time prescribed by the Faculty will not be allowed to continue in the program.
 - k. A student who fails reexamination will be deemed to have failed the course and will be referred to the appropriate Academic Standing Committee.
8. Academic Standing: Final decisions regarding academic standing and promotion to the next year of graduation are made by the Faculty Academic Standing and Promotion Committee with recommendations from the Academic Standing Committees.
 - a. No student may proceed to any subsequent year of the medical program and will be required to withdraw unless they have passed all courses for that academic year.
 - b. Students who do not pass all Year 3 and 4 courses, except MED 540 will not be allowed to write the comprehensive exam and will be required to withdraw.
9. Regulations Concerning Repetition of a year because of Academic Failure:
 - a. No student will be allowed to repeat Year 1 of the MD program. At the discretion of the Dean, students in Year 2, 3 or 4 may be allowed to repeat a failed year.
 - b. A student repeating a year is not allowed reexamination privileges in that year of the program.
 - c. No student is allowed to repeat more than one year of the MD program.
10. Voluntary Withdrawal: A student wishing to temporarily withdraw registration from the MD program is required to make written application to the Associate Dean, MD program, stating the reasons for withdrawal and the intended period of absence. Readmission to the MD program following voluntary withdrawal will be based on the following:
 - a. review, by the Faculty, of the reasons for withdrawal and of the student's academic record;
 - b. availability of a place, within quota, in the class to which the student seeks readmission. Priority is assigned in the following order:
 - i. students who have met normal promotion requirements.
 - ii. Faculty approved repeating students and students returning after voluntary withdrawal, in order of academic standing.

- c. The length of time the student interrupts studies leading to the MD degree must not exceed two years in total.
- a. Faculty Advisor: At the discretion of the Faculty, an advisor may be assigned to students having difficulty meeting promotion requirements. The method of assignment and role of the advisor shall be determined by the Faculty.

11. All students registered in the MD program are required by provincial legislation to be registered in the Educational Register of the Alberta College of Physicians and Surgeons. This registration permits the practice of medicine within the confines of the formal medicine curriculum. Students in the MD program are required to adhere to the professional code of ethics of the Alberta College of Physicians and Surgeons. (Amendments to the Code of Student Behaviour occur throughout the year. The official version of the Code of Student Behaviour, as amended from time to time is housed on the University Governance website at www.governance.ualberta.ca.)

12. Medical Testing and Immunization Requirements:

To ensure, insofar as possible, both student and patient safety, the Faculty requires immunization against, or proof of immunity to, poliomyelitis, diphtheria, tetanus, pertussis, measles, mumps, rubella, and hepatitis B. As well, varicella titre and a two-step tuberculin skin test is required in the first year of the program and should be performed by the University of Alberta Health Centre.

For students in Medicine, where there is a greater potential for transmission of bloodborne pathogens from students to patients as a result of activities involved in their clinical experience in practice settings, the following procedures will apply:

Hepatitis B: Hepatitis B surface antigen testing will be performed by the University Health Centre on all students after acceptance into the program. For those students who test negative for Hepatitis B surface antigen (HbsAg), Hepatitis B vaccination will be required. An exception will be made for those for whom it is medically contraindicated or for those individuals who have proof of prior vaccination and test positive for antibody to Hepatitis B surface antigen (anti-HBs). After vaccination, students will receive a second test to determine if they have converted to produce the appropriate antibody titre. If they have not converted they will receive a second vaccination and again be tested. Those students who then fail to convert will be counselled as to their potential risk status during training and future practice. All students who test negative for Hepatitis B surface antigen after vaccination will be tested again for surface antigen and Hepatitis B viral DNA at the end of second year, prior to starting clinical placements.

For students who test positive for Hepatitis B surface antigen their "e" antigen (HbeAg) status and the presence of Hepatitis B viral DNA will be determined. If they are found to be positive for the "e" antigen or the viral DNA they will be counselled as to their risk of infecting patients and they will be required to follow a modified clinical training program.

The decision of the Faculty as to the modifications to the training program may be appealed to the Practice Review Board (Practicum Intervention Policy).

At all times students will follow *Universal Precautions* when there is potential of exposure to human blood or body fluids.

Human Immunodeficiency Virus (HIV) and Hepatitis C Virus (HCV): The data indicates that transmission of the human immunodeficiency virus (HIV) and Hepatitis C Virus (HCV) from a health care worker (HCW) to a patient in a health care setting is extremely rare, although transmission from patients to a HCW is more common. Therefore, all students accepted into the Faculty of Medicine and Dentistry are encouraged to undergo HIV and HCV testing upon admission and at any time during their program when concerns about infection have arisen, but testing for HIV and HCV is not mandatory at this time.

Note: For updates on changes to medical testing and immunization refer to the Faculty Office.

BSc Program in Medical Laboratory Science

1. **Academic Standing:** Final decisions regarding academic standing and promotion to the next year or graduation are made by the Faculty of Medicine and Dentistry Academic Standings and Promotion Committee

based on recommendations of the Medical Laboratory Science Academic Standing Committee.

- Promotion in the Medical Laboratory Science program depends on passing grades in all subjects of the previous year with a minimum GPA of 2.0, as well as the following requirements:

Phase I

Each laboratory instructor assesses the competence in communication, comprehension, and technical skills of each student several times throughout the academic year. These assessments are documented as a written evaluation that the student is asked to sign. At the end of the Phase, the instructors assign each student a pass or probationary rating based on these evaluations. Students with a GPA of 2.0 who have a majority of unsatisfactory technical ratings are permitted to proceed into Phase II on probation. Students in Phase II who are on probation must withdraw if they receive an unsatisfactory technical rating in any one course. Students entering Phase II with a majority of pass ratings from all the Phase I Medical Laboratory Science courses are assessed as having satisfactory standing.

Phase II

For those Medical Laboratory Science courses with both technical and academic demands, the student must successfully complete the requirements of both components to receive a passing grade. The competence in communication, comprehension, and technical skills of each student will be assessed by Competency Based Objectives (CBOs) in each Medical Laboratory Science course. Students must pass all the CBOs for each course according to the policies outlined in the specific manuals for each course. Students who do not achieve this in any one course will be required to satisfactorily complete a remedial period of training in that course. A student who requires remedial training in more than one course will be required to withdraw. Students who have entered Phase II on probation (see Phase I) will not normally be allowed remedial training and will be required to withdraw.

- The Dean, or Supervisor acting on behalf of the Dean, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions or site of practicum/clinical placement if the Dean or Supervisor has reasonable grounds to believe that this is necessary in order to protect the Public Interest. (See Practicum Intervention Policy.)
- The Division of Medical Laboratory Science Technical Standards Policy defines the necessary knowledge, skills, professional behaviours, and attitudes required of students. Please see the Medical Laboratory Science website for further information.
- Promotion in the post-professional certificate BSc program in Medical Laboratory Science depends on passing grades in all subjects of the previous year with a minimum GPA of 2.0.
- Reexamination:**
 - Students are allowed reexamination privileges only in courses that are failed.
 - Students must achieve a GPA of 2.0 inclusive of the failed course in order to be considered for reexamination.
 - The Division of Medical Laboratory Science Academic Standings Committee must approve reexamination.
 - If reexamination is approved, satisfactory completion of a remedial program may be required before the student is permitted to take the reexamination.
- A student permitted to repeat a course or an entire phase must withdraw unless a minimum average grade of 2.7 is obtained on the repeated work.
- Any student whose technical work or academic performance is deemed unsatisfactory may be required to withdraw from the Faculty.
- Voluntary Withdrawal:** A student wishing to temporarily withdraw registration from the MLS program is required to make written application to the Director, stating the reasons for withdrawal and the intended period of absence. Readmission to the MLS program following voluntary withdrawal will be based on the following:
 - review, by the Faculty, of the reasons for withdrawal and of the student's academic record;
 - availability of a place, within quota, in the class to which the student seeks readmission.
 - The length of time the student interrupts studies leading to the BSc in MLS degree must not exceed two years in total.
- Faculty Advisor:** At the discretion of the Faculty, a Faculty advisor may be assigned to students having difficulty meeting promotion requirements. The method of assignment and the role of the Faculty advisor is determined by the Faculty.

- First class standing:** awarded to students with a GPA of not less than 3.5 while enrolled in a normal academic course load.
- With Distinction:** awarded to graduating students who have obtained an average GPA of not less than 3.5 during the final 60 credits of course work.

BSc Program in Radiation Therapy

The following apply to students in the Bachelor of Science in Radiation Therapy.

- Grades**
 - The means of assessing a student's progress and determining a student's grades may vary from one course to another, according to the nature of the course. Factors other than examination results may be used to a variable extent by instructors in determining grades. Students are informed at the beginning of each course how grades are to be determined.
 - Students must satisfactorily complete all components of all courses.
- Promotion and Academic Performance**
 - Progression in the program is term by term. Accordingly, all students in a particular co-hort of the program normally should be registered in the same courses in each term (see Degree of BSc in Radiation Therapy.) Students will not normally register in any core (i.e., non-elective) courses from a particular term of the program until they have satisfactorily completed core courses from the previous term of the program.
 - Academic Performance:** Assessment of academic performance is conducted at the end of each student's registration in the Fall/Winter Terms.
 - First-Class Standing:** Awarded to a student who obtains a GPA of 3.5 or above and passes all courses while enrolled in the full normal academic/clinical course load after the completion of the Fall/Winter Terms.
 - Satisfactory Standing:** For promotion, a student must pass all courses and obtain a minimum GPA of 2.7.
 - Conditional Standing:** Whenever a student receives a final grade of less than a B- in a Radiation Therapy Program course, the student's total academic and clinical performance in the program will be reviewed. This review will be considered in determining continuation in the program.
 - Required to Withdraw:** Any student who
 - fails more than one academic course per program year (program year includes Fall, Winter, and Spring/Summer Terms)
 - fails any clinical course;
 - is unable to obtain a minimum GPA of 2.7 in any term;
 - Probation:** Students who have been required to withdraw and who have successfully appealed that decision will be placed on Probation and required to repeat the full program year. To clear probation and qualify for promotion, the student must achieve Satisfactory Standing in all terms during the probationary year. Students who fail to do so will be required to withdraw. Any student in a probationary year who fails a course in Fall Term will be required to withdraw immediately and subsequent registration will be cancelled. Only one year of probation is allowed while registered in the BSc in Radiation Therapy program.
- Clinical Performance:**
 - A student who is absent more than two clinical days in any one clinical course may need to make up the lost time before being allowed to continue in the program.
 - The Program Director, or designate acting on behalf of the Program Director, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions or site of a practicum/clinical placement if the Program Director or designate has reasonable grounds to believe that this is necessary in order to protect the public interest. (See Practicum Intervention Policy).
 - All students enrolled in the Radiation Therapy program are bound by, and shall comply with the Professional Codes of Ethics governing the profession and practice of Radiation Therapy.
 - "Professional Codes of Ethics" means the current Canadian Association of Medical Radiation Technologists (CAMRT), Alberta College of Medical Diagnostic and Therapeutic Technologists

(ACMDTT), and all other relevant professional codes and practice standards for Radiation Therapists.

- ii. It is the responsibility of each Radiation Therapy student to obtain, and be familiar with, such Professional Codes of Ethics and practice standards, and their amendments as may be made from time to time. (See §30.3.3 of the Code of Student Behaviour). Amendments to the Code of Student Behaviour occur throughout the year. The official version of the code of Student Behaviour, as amended from time to time, is housed on the University Governance website at www.governance.ualberta.ca.
4. **Voluntary Withdrawal:** A student wanting to temporarily withdraw registration from the Radiation Therapy Program is required to make written application to the Program Director of the Radiation Therapy Program, stating the reasons for withdrawal and the intended period of withdrawal. Each request will be considered on a case by case basis. Readmission to the Radiation Therapy Program following voluntary withdrawal will be assessed on a case by case basis. Readmission is not guaranteed due to quota. If the length of time the student interrupts their studies exceeds two years, the student will not be granted readmission into the Radiation Therapy Program.
5. **Faculty Advisor:** At the discretion of the Faculty, a Faculty advisor may be assigned to students having difficulty meeting promotion requirements. The method of assignment and the role of the Faculty advisor is determined by the Faculty.
6. **Reexamination:** See Reexaminations
 - a. Reexamination is not permitted in clinical courses.
 - b. The Director of the Radiation Therapy Program must approve reexaminations.
 - c. Students are advised that it is not possible to make a ruling regarding remediation or reexamination until all grades for a term are received and recorded.
 - d. If a reexamination is approved, satisfactory completion of remedial coursework may be required by the Radiation Therapy Program Academic Standing Committee and/or the Faculty Academic Standings and Promotion Committee before the student is permitted to take the reexamination.
 - e. The weight of reexamination is at least that of the final examination.
 - f. The reexamination mark (as in the case of a deferred mark) will replace the original final exam mark.
 - g. Any student who, after reexamination and/or evaluation fails to meet promotion/graduation requirements is deemed to have failed the year and will not be allowed to continue in the program.
 - h. A student who does not take a reexamination within the time period prescribed by the Faculty will not be allowed to continue in the program.
7. **Graduation:**
 - a. Academic Performance for Graduation: Students must achieve Satisfactory Academic Standing or First Class Standing in their final year of the program; successfully complete all program requirements; and present a graduation average of at least 2.7. The graduation average is a cumulative measure of a student's grade points obtained while registered in the program in all years and terms, including Spring/Summer. It is the quotient of (a) the total number of grade points earned by a student in courses credited to the degree and (b) the total weight of those courses.
 - b. The notation of "With Distinction" is awarded to a graduating student who has obtained an average GPA of 3.5 or higher and no failing grades over the entire program.
8. **Clinical Placement Policies and Requirements:** All students must comply with all Clinical Placement Policies and Requirements.
 - a. Clinical Placements will be facilitated at various cancer centres in Alberta that provide radiation therapy services. Current sites are Cross Cancer Institute in Edmonton, and Tom Baker Cancer Centre in Calgary. Future sites may include Lethbridge, Red Deer and Grande Prairie. Students are responsible for their transportation to clinical placements and for the costs of travel, living and accommodations
 - b. Students must purchase two lab coats and may wish to purchase uniforms for the clinical courses during the program.
 - c. Valid certification of CPR (Cardiopulmonary Resuscitation) at the Healthcare Provider Level required and must be maintained throughout the program. A CPR-Healthcare Provider certificate is valid for one year

from the date of the course. Evidence of recertification in each subsequent year is required.

- d. **Technical Standard:** Students whose skills and abilities change during their studies must declare this change to the program designate for clinical placements immediately. The program will attempt to provide reasonable accommodation, however the student may be required to withdraw from the program if this is not possible.
- e. **Medical Testing and Immunization:** To ensure, insofar as possible, both student and patient safety, the Faculty requires immunization against, or proof of immunity to, poliomyelitis, diphtheria, tetanus, pertussis, measles, mumps, rubella, and hepatitis B. As well varicella screening and a two-step tuberculin skin test in required in the first year of the program and should be performed by the University Health Centre. Requirements: See BSc Program in Radiation Therapy.
- f. **Hepatitis B Virus (HBV):** Hepatitis B antigen testing will be performed by the University Health Centre on all students after acceptance in to the program. Students who test negative for Hepatitis B surface antigen (HbsAg), Hepatitis B vaccination will be required. An exception will be made for those for whom is medically contraindicated or for those individuals who have proof of prior vaccination and test positive for antibody to Hepatitis B surface antigen (anti-HBs). After vaccination, students will receive a second test to determine if they have converted to produce the appropriate antibody titre. If they have not converted they will receive a second vaccination and again be tested. Those students who then fail to convert will be counselled as their potential risk status during training and future practice.

For students who test positive for Hepatitis B surface antigen their "e" antigen (HbeAg) status and the presence of Hepatitis B viral DNA will be determined. If they are found to be positive for the "e" antigen or the viral DNA they will be counselled as to their risk of infecting patients.

- g. **Human Immunodeficiency Virus (HIV) and Hepatitis C Virus (HCV):** The data indicates that transmission of the human immunodeficiency virus (HIV) and Hepatitis C (HCV) from health care worker (HCW) to a patient in a health care setting is extremely rare, although transmission from patients to a HCW is more common. Therefore, all students accepted into the Faculty of Medicine and Dentistry are encouraged to undergo HIV and HCV testing upon admission and at any time during their program when concerns about infection have arisen, but testing for HIV or HCV is not mandatory at the time.

Note: For updates on changes to medical testing and immunization refer to the Faculty Office.
- h. **N-95 Respirator Fit Testing:** Students are required to be fit tested for N 95 respirators. Check with the Program office for the procedures to obtain this fit testing. The associated costs are the responsibility of the student.
- i. **Police Information Check:** Students must clear a Police Information Check requiring a Vulnerable Sector Check. Refer to Requirement for Police Information Checks.
- j. The Program Director, or Designate acting on behalf of the Program Director, may immediately deny assignment of a student to, withdraw a student from, or vary terms, conditions or site of practicum/clinical placement if the Program Director, or Designate has reasonable grounds to believe that this is necessary in order to protect the Public Interest. (See Practicum Intervention Policy.)

Appeals and Grievances

Students may appeal academic standing decisions in the Faculty. There are informal ways to appeal as well as strict deadlines for submission of formal appeals. Students may obtain the Faculty's complete appeal regulations from the Office of the Dean, 2J2 Walter Mackenzie Health Sciences Centre. Under certain conditions, an unsuccessful appeal in the Faculty may be carried to the General Faculties Council Academic Appeals Committee. See Appeals and Grievances.

Students who have a grievance about a grade in an individual course taught in this Faculty should consult Appeals and Grievances, which describes the informal process for addressing concerns about grades. There is also a formal process in the Faculty for appealing a grade. This process, including deadlines for submission of an appeal, is set out in the Faculty's academic appeal regulations, available from the Office of the Dean, 2J2 Walter Mackenzie Health Sciences Centre.

Programs of Study

Protection for Persons in Care

Students should be aware that under the *Protection for Persons in Care Act* all students going to any clinical placement or rotation in Alberta are required to complete a Police Information Check (also known as a Criminal Record Check, Security Clearance Check, or Police Clearance), which must include a Vulnerable Sector Check. The clinical practice site will determine the criteria for acceptance/denial of a placement. Students are responsible for having a criminal record check completed upon receiving conditional admission to the Faculty.

Students who have concerns related to their ability to provide a clear Police Information Check should consult with the Faculty. The ultimate responsibility for ensuring that students meet the requirements of clinical agencies lies with the students. Other background checks may be required by a clinical agency, such as a child intervention record check. Students will be advised if any additional background checks are required by a clinical agency. See Requirement for Police Information Checks for more information on the general requirements concerning Police Information Checks and the fees associated with them.

Should a student subsequently be charged or convicted while enrolled in the program, the student must advise the Faculty. Students should be aware that having an unclear Police Information Check can prevent them from securing a clinical placement and hence, preclude them from graduating from the program and/or becoming licensed to practice.

MD with Special Training in Research

This program is for students looking for in-depth exposure to research during medical school. (Each candidate must spend a minimum of 24 weeks [two consecutive summers] of active involvement in scientific research and present oral and written reports to fulfil the requirements for the MD with Special Training in Research.) The program is monitored by the MD Research Committee, and each student is supervised by a staff member. Successful students are recognized on their transcripts and medical diplomas. For information, contact the Office of Research, Faculty of Medicine and Dentistry, 2-13 Heritage Medical Research Centre. Successful students receive recognition on their transcripts and degrees through the notation "with Special Training in Research."

Honors in Research Program in Medical Laboratory Science

This program is for students looking for in-depth exposure to research during Medical Laboratory Science education. Students wanting to pursue this program will have a GPA of at least 3.5 in courses taken in the first and second phases of the program and will have completed STAT 141, STAT 151, STAT 337, or equivalent. Students must spend one summer (16 weeks) and complete a ★6 research course offered by the Division. All students are supervised by a staff member who has shown commitment to the project and to the financial support of the student for the summer months. The program is monitored by the MD Research Committee. Successful students receive recognition on their transcripts and degrees through the notation "With Honors in Research." For information, contact the Director, Division of Medical Laboratory Science, 5-411 Edmonton Clinic Health Academy.

Graduate Studies

The Faculty of Medicine and Dentistry offers Master's, PhD and MD/PhD degrees. Details on these programs can be found in the Graduate Programs section of the Calendar, listed by department.

Continuous Professional Learning

Continuous Professional Learning provides practicing physicians with the opportunity to remain up-to-date in knowledge, skills and attitudes. The division currently offers the Video-conference program, the Urban Program and PCN customized programs for urban physicians. The division is also involved in the Physician Learning Program, a collaboration project with the University of Calgary. The Physician Learning Program is an evidence-based, practice specific learning tool. Using provincial data sources to capture both perceived and unperceived learning needs, physicians can become informed about their individual needs and receive guidance and assistance in the pursuit

of educational activities in light of the evidence. The Division enjoys the support of the College of Family Physicians of Alberta, Alberta Health, and the Alberta Medical Association (<http://albertapl.ca>)

Inquiries about these programs should be directed to the Associate Dean, Continuous Professional Learning, 2-590 Edmonton Clinic Health Academy, University of Alberta, Edmonton, AB T6G 1C9.

Continuing Dentistry Education

The Department of Dentistry sponsors a wide variety of continuing dental education opportunities throughout the year through the Continuing Dental Education program. Courses are offered both on campus and occasionally at other sites within the province. Annually, thousands of dentists, dental hygienists, dental assistants and others participate in the many lecture, hands-on clinical and laboratory-type courses that are offered. Local and visiting speakers of national and international reputation provide continuing education of a high quality.

Postgraduate Medical Education

Postgraduate medical training is a component of eligibility for licensure in Canada. Programs are operated by the University of Alberta according to guidelines established by the College of Family Physicians of Canada and by the Royal College of Physicians and Surgeons of Canada.

Postgraduate training accredited by the College of Family Physicians of Canada is available under the auspices of the Department of Family Medicine. In addition to the standard two-year program required for certification in Family Medicine, a certificate program in Emergency Medicine and a diploma program in Care of the Elderly are also available with an additional year of training.

Specialty programs accredited by the Royal College of Physicians and Surgeons of Canada include the following:

Primary Certification Programs

Anaesthesiology and Pain Medicine
Anatomical Pathology
Cardiac Surgery
Community Medicine
Dermatology
Diagnostic Radiology
Emergency Medicine
General Pathology
General Surgery
Haematological Pathology
Head and Neck Surgery
Internal Medicine
Medical Microbiology
Neurology (Adult and Paediatric)
Neurosurgery
Nuclear Medicine
Obstetrics and Gynaecology
Occupational Medicine
Ophthalmology
Orthopaedic Surgery
Otolaryngology
Paediatrics
Physical Medicine and Rehabilitation
Plastic Surgery
Psychiatry
Radiation Oncology
Urology

Subspecialty Certification

Cardiology (Adult and Paediatric)
Critical Care Medicine
Developmental Paediatrics
Endocrinology (Adult and Paediatric)
Gastroenterology (Adult and Paediatric)
Geriatric Medicine
Haematology
Infectious Diseases (Adult and Paediatric)
Medical Oncology
Neonatal Perinatal Medicine
Nephrology (Adult and Paediatric)
Occupational Medicine

Paediatric Emergency Medicine
 Paediatric Hematology/Oncology
 Respiriology (Adult and Paediatric)
 Rheumatology

Special Programs

Clinician Investigator Program
 Palliative Care Medicine

Inquiries regarding these programs should be directed to the Associate Dean, Postgraduate Medical Education, 2-76 Zeidler Leducor Centre, University of Alberta, Edmonton, AB T6G 2E1.

All postgraduate medical trainees are registered as graduate students in the Division of Postgraduate Medical Education of the Faculty of Medicine and Dentistry and pay a program registration fee.

Application for entry-level postgraduate positions in all Primary Certification Programs is made through the Canadian Resident Matching Service (CaRMS) in the final year of medical school. Further information is available from the Canadian Resident Matching Service, 2283 St Laurent Blvd Ste 110, Ottawa, ON K1G 3H7. Certificate of Special Competence program require prior training in a Primary Certification Program. All international medical graduates must pass the Evaluating Examination and Part I of the Qualifying Examination of the Medical Council of Canada. Information is available from the Medical Council of Canada, Box 8234, Station T, Ottawa, ON K1G 3H7.

The requirements for a portable license valid in all Canadian provinces except Quebec are as follows:

3. An MD degree.
1. The Licentiate of the Medical Council of Canada (LMCC), obtained after successfully passing Parts I and II of the Medical Council of Canada Qualifying Examination (MCCQE). Part I is written in May of the final year of medical school. Part II is written after completing 12 months of postgraduate clinical training.
2. Certification from either the College of Family Physicians of Canada or the Royal College of Physicians and Surgeons of Canada.

Further information regarding licensure is available from the College of Physicians and Surgeons of Alberta, #2700 Telus Plaza, 10020-100 Street NW, Edmonton, AB T5J 0N3.

Note: For classification purposes, postgraduate medical students are considered graduate students. As such, they have the option of paying fees to the Graduate Students' Association.

Postgraduate Dental Education

General Practice Residency

The General Practice Residency is designed to enhance the diagnostic, treatment planning and clinical skills of general dentists in management of patients with complex systemic health issues, as well as key specialty disciplines so that they can successfully deliver a broader range of oral health care services.

This general practice residency program is one calendar year in length, July 1 through June 30. Three recent DDS graduates are accepted each year, generally graduates of accredited Canadian dentistry programs.

Under the direction of dental specialists and general practitioners, residents will provide care to patients who frequently are not seen in community dental practices for reasons of systemic disease or disability. Patients are treated at University of Alberta Hospital during scheduled day-time hours, during a walk-in emergency clinic evenings and week-ends, and occasionally on-call. Residents also provide patient care at the University of Alberta School of Dentistry in the Edmonton Clinics and other affiliated hospitals. Through seminar sessions and clinical teaching, the areas of endodontics, periodontics, prosthodontics, oral surgery, dental implants, pediatric dentistry, hospital dentistry, conscious sedation, advanced oral diagnosis and treatment planning, oral medicine, orofacial pain and advanced general dentistry are taught.

An important additional component of this residency program will include health care rotations by each resident to an underserved area of this province.

Combined Program for the Degrees of MD and PhD

The MD/PhD combined program is intended for exceptional students who are seriously committed to a career in medical research. Highly qualified students wishing to pursue a career of teaching and research in either basic medical science or in clinical medicine may enrol in a program of approximately six years' duration leading to the acquisition of both an MD and a PhD degree

from the University of Alberta. To be eligible for the combined program, students must already have been admitted to the MD program. Students are admitted to the combined program on the recommendation of the MD/PhD Committee.

Students entering the MD program from a preprofessional medical or a bachelor's program, and who are interested in applying to the MD/PhD program, should do so in their first year of medical school. For these students, admission into the program begins after completion of the second year of the MD program. Alternately, students who are transferring from a University of Alberta graduate program to the MD program are eligible to enrol immediately in the combined program. The most common route is for students to complete the first two years of the MD program, apply for and be admitted into the PhD program, and when the PhD is completed, return to the final two years of the MD program. Students pursuing the combined program will be assessed fees for both the MD and the PhD programs.

Students interested in such a program may obtain further information from the Office of Research, Faculty of Medicine and Dentistry, 2-13 Heritage Medical Research Centre, University of Alberta, (780) 492-9721, janis.davis@ualberta.ca.

Courses

Faculty of Medicine and Dentistry courses are listed in Course Listings, under the following subject headings:

Anaesthesiology and Pain Medicine (ANAES)
 Anatomy (ANAT)
 Biochemistry (BIOCH)
 Biomedical Engineering (BME)
 Cell Biology (CELL)
 Dentistry (DDS)
 Dentistry (DENT)
 Dentistry/Medicine (DMED)
 Dental Hygiene (D HYG)
 Family Medicine (F MED)
 Laboratory Medicine Pathology (LABMP)
 Medical Genetics (MDGEN)
 Medical Laboratory Science (MLSCI)
 Medical Microbiology and Immunology (MMI)
 Medicine (MED)
 Medicine, Interdepartmental (INT D and MED)
 Neuroscience (NEURO)
 Obstetrics and Gynaecology (OB GY)
 Oncology (ONCOL)
 Ophthalmology (OPHTH)
 Oral Biology (OBIOB)
 Paediatrics (PAED)
 Pharmacology (PMCOL)
 Physics/Biomedical Engineering (PH BE)
 Physiology (PHYSL)
 Postgraduate Medical Education (PGME)
 Psychiatry (PSYCI)
 Public Health Sciences (PHS)
 Radiology and Diagnostic Imaging (RADDI)
 Surgery (SURG)

DDS Advanced Placement Program

General Information

The Department of Dentistry offers an advanced placement DDS degree to a selected number of students who already possess a dental degree from a dental program recognized by the World Health Organization. After admission into the program, these students will enter the third year of the program and will be fully integrated with the third year students. The purpose of the program is to enable these students to write the National Dental Examining Board examinations for certification to practice dentistry in Canada.

Curriculum for Advanced Placement Students

Prior to entry into the program, students will be required to participate in and complete DDS 829 - Introduction to DDS Advanced Placement. Upon completion of DDS 829, students will follow the third year DDS curriculum, including assignments to treat patients in the University's Department of Dentistry clinics under the supervision of the clinical faculty.

The curriculum for second-year Advanced Placement students will follow the fourth year DDS curriculum which will include assignments to the Satellite Dental Clinic in northern Alberta and external hospitals. Thus students are able to relate their field of health service to the science and art of preventing, treating, and alleviating disease.

Course Requirements

Year 1

- DDS 541 - Dental Pharmacology
- DDS 545 - Clinical Practice I
- DDS 547 - Geriatrics
- DDS 555 - Practice Management

Year 2

- DDS 565 - Clinical Practice II

DDS Degree

General Information

Curriculum

The Department of Dentistry offers a four-year (11-term) program leading to the degree of Doctor of Dental Surgery (DDS), following satisfactory completion (after senior matriculation) of at least two preprofessional years of university education. The preprofessional years provide the necessary background in inorganic chemistry, organic chemistry, biology, physics, biochemistry, statistics, the humanities, and social sciences.

The first and second years of the dental program are combined with the MD program. The curriculum is taught in blocks and covers areas as Infection, Immunity and Inflammation, Endocrine System, Cardiovascular, Pulmonary and Renal Systems, Gastroenterology and Nutrition, Musculoskeletal System, Neurosciences, Oncology. These subjects are augmented by dental courses offered by the respective divisions. The lectures, laboratories, seminars, and clinics offered by the Department of Dentistry relate and integrate these fundamental disciplines with the knowledge, skills, judgement, and performance required of dental practitioners.

Senior students are assigned to the Dental Clinic and the Department of Dentistry at the University of Alberta Hospital. An experience in the Satellite Dental Clinic and the external hospitals is required in the final year of the program. Thus students are able to relate their field of health service to the science and art of preventing, treating, and alleviating disease.

See Graduate Programs for information on programs of graduate study offered by the Department.

Library

The Medical Sciences reading room of the John W Scott Health Sciences Library contains a comprehensive selection of reference materials and textbooks on dentistry and related subjects. In addition, it contains most

current dental journals in English and other languages, and the Index to Dental Periodical Literature, an index to all dental periodicals since 1839.

Orientation

It is mandatory that each student, after acceptance into the program, attend Orientation. This is scheduled immediately before the beginning of the first term of each year.

Course Requirements

Year 1

- DMED 511 - Introduction to the Profession
- DMED 512 - Infection, Immunity and Inflammation
- DMED 513 - Endocrine System
- DMED 514 - Cardiovascular, Pulmonary and Renal Systems
- DDS 509 - Pre-Clinical Practice of Dentistry I
- DDS 510 - Patient-Centred Care 2-6s-0/week
- DDS 514 - Anatomy (Dental) 0-0-60
- DDS 518 - Oral Biology I 54-0-6

Year 2

- DDS 506 - Gastroenterology and Nutrition
- DDS 507 - Neurosciences and Organs of Special Senses
- DDS 508 - Oncology
- DDS 517 - Psychiatry
- DDS 520 - Patient-Centred Care 2-6s-0/week
- DDS 523 - Musculoskeletal System
- DDS 529 - Pre-Clinical Practice of Dentistry II
- DDS 532 - Oral Biology II 60-0-0
- DDS 533 - Oral Pathology 30-0-0
- INT D 410 - Interprofessional Health Team Development 0-32.5-0

Year 3

- DDS 541 - Dental Pharmacology
- DDS 545 - Clinical Practice I
- DDS 547 - Geriatrics
- DDS 555 - Practice Management

Year 4

- DDS 565 - Clinical Practice II

Degree of Bachelor of Medical Science

The degree of Bachelor of Medical Science may be awarded to students in the DDS or MD program at the end of the second year of that program who have fulfilled the following requirements at this or another university:

1. Two or more years of social sciences, general sciences, physical sciences or engineering, with successful completion of undergraduate course work totaling no less than ★60 with one academic year of ★30.
2. Successful completion of Year 1 and 2 of the DDS or MD program.

Provisions

1. None of the courses mentioned above have been used for credit toward another degree.
2. The final two years must be taken at the University of Alberta.
3. All courses have been successfully completed.

Degree of BSc in Medical Laboratory Science

General Information

The Faculty of Medicine and Dentistry offers an undergraduate degree program in Medical Laboratory Science to meet the demand for more highly qualified research laboratory personnel; for senior and supervisory technologists in large hospitals, government, and private laboratories; and for teaching positions in various schools of medical laboratory technology. The BSc in Medical Laboratory Science is a versatile degree that allows access to a multitude of advanced degrees and programs.

The preprofessional year and Phases I and III of the program are normal university years. Phase II, beginning approximately July 1, consists of clinical hospital laboratory training under the direct supervision of the Faculty of Medicine and Dentistry. If successful in all competency based objectives, students may write certification examinations with the Canadian Society for Medical Laboratory Science.

Note: Because individuals working in hospital laboratories run some risk of infection from materials they handle, all students in the Medical Laboratory Science program must take a series of immunizations approved by the Office of the Dean of Medicine and Dentistry before beginning Phase I.

Orientation

It is mandatory that each student, after acceptance into the program, attend Orientation. This is scheduled immediately before the beginning of the first term.

Program of Courses

Phase I

- MLSCI 200 - Transition to Clinical Practice
- MLSCI 230 - Hematology
- MLSCI 235 - Hemostasis
- MLSCI 242 - Pathogenic Microbiology I
- MLSCI 243 - Pathogenic Microbiology II
- MLSCI 250 - Human Histology and Histotechnology
- MLSCI 262 - Clinical Biochemistry
- MLSCI 263 - Clinical Biochemistry
- MLSCI 270 - Transfusion Science
- PHYSL (★6)
- Arts Option (★3)

Phase II– Clinical Rotation (See Note 1)

- BIOCH 200 - Introductory Biochemistry
- BIOCH 330 - Nucleic Acids and Molecular Biology
- MLSCI 320 - Analysis and Communication of Biomedical Information
- MLSCI 330 - Clinical Hematology
- MLSCI 340 - Clinical Microbiology
- MLSCI 350 - Histopathology
- MLSCI 360 - Clinical Biochemistry
- MLSCI 370 - Transfusion Science

Phase III (See Note 2)

- MLSCI 480 - Molecular Genetic Approaches to the Study and Diagnosis of Disease
- MLSCI 410 - Introduction to Clinical Laboratory Management
- INT D 410 - Interprofessional Health Team Development
- Arts option (★3)

★12 chosen from

- MLSCI 420 - Emerging Trends in Medical Laboratory Science
- MLSCI 430 - Advanced Hematology
- MLSCI 460 - Clinical Biochemistry
- MLSCI 466 - Applied Toxicology
- MLSCI 475 - Clinical Immunology
- MLSCI 481 - Techniques in Molecular Biology
-
- MMI 426 - Medical Parasitology **OR**
- MMI 427 **OR**
- MMI 405 - Advanced Microbial Pathogenicity **OR**
- MMI 415 - Advanced Viral Pathogenesis

Project course:

- MLSCI 491 - Research Project
- **OR**
- MLSCI 409 - Research Project **AND**
- Science option (★3)

Notes

1. During the Phase II clinical rotation, students are assigned to hospital laboratories approved for this purpose by the Council of the Faculty of Medicine and Dentistry.
2. ★3 in a Science option are required if a ★3 project is attempted. ★0 in a science option are required if a ★6 project is attempted.

Degree of BSc in Radiation Therapy

General Information

The Department of Oncology in the Faculty of Medicine and Dentistry at the University of Alberta offers a undergraduate degree in Radiation Therapy. The program is designed to develop a competent, critical thinking, reflective radiation therapist who effectively contributes to the care of the patient with cancer and who is committed to excellence in professional practice.

Program design support learners' progression from knowledge through skill acquisition to synthesis and competency. It also enables the development towards achievement of the described professional qualities of a radiation therapist by thinking, communicating, and acting in increasingly sophisticated ways. This degree prepares graduates to pursue post-baccalaureate or graduate programs that may lead to advanced practice opportunities.

In addition, students will learn the foundations of research and engage in group research projects during the clinical component of the fourth year of the degree program. For admission information See Bachelor of Science in Radiation Therapy.

Orientation

It is mandatory that each student, after acceptance into the program, attend Orientation. This is scheduled immediately before the beginning of the first term.

Program of Courses

Year 2

- ONCOL 253 - Cancer Biology
- ONCOL 233 - Concepts and Applications in Medical Physics
- CELL 201 - Introduction to Molecular Cell Biology
- RADTH 205 - Patient Care Principles and Practices
- PHYSL 210 - Human Physiology
- ONCOL 243 - Radiation Protection and Safety
- ANAT 200 - Human Morphology
- ONCOL 234 - Therapeutic and Imaging Equipment in Radiation Therapy
- ONCOL 254 - Principles of Oncology
- ONCOL 255 - Introduction to Oncology
- RADTH 260 - Radiation Therapy Clinical Practicum I

Year 3

- ONCOL 335 - Radiobiology
- RADTH 301 - Principles and Practices in Radiation Therapy
- ONCOL 355 - Treatment Planning and Dosimetry I
- ANAT 305 - Cross-Sectional Anatomy
- RADTH 328 - Health Care Advocacy and Policy
- ONCOL 309 - Clinical Oncology I
- ONCOL 310 - Clinical Oncology II
- ONCOL 356 - Treatment Planning and Dosimetry II
- ONCOL 306 - Imaging Principles/Pathology
- INT D 410 - Interprofessional Health Team Development
- RADTH 360 - Clinical Simulation and Reasoning
- RADTH 401 - Radiation Therapy Research Methodology

Year 4

- RADTH 460 - Radiation Therapy Clinical Practicum II
- RADTH 411
- RADTH 461 - Radiation Therapy Clinical Practicum III

Dental Hygiene Diploma/Bachelor of Science (Dental Hygiene Specialization)

General Information

The Department of Dentistry offers a Diploma in Dental Hygiene and a Bachelor of Science (Dental Hygiene Specialization). The Dental Hygiene Program enables students to acquire knowledge and develop skills so that they may assume responsibility in clinical practice, health promotion, education, community health care, and research.

The dental hygienist is an integral member of the health care team and strives to improve oral health by providing preventive services and educational information to the public. Clinical dental hygiene services may include assessing patients' health status, inspecting hard and soft tissues of the oral cavity, removing deposits and stains from teeth, exposing and developing dental radiographs, applying topical fluorides, administering anaesthetic, taking impressions for study models, and polishing amalgam restorations. Educational information may include nutritional and oral hygiene counselling and community dental health program planning, implementation, and evaluation.

The dental hygienist with a baccalaureate degree is a leader in developing and initiating oral health interventions that prevent and control oral disease and promote oral wellness. The ultimate goal of a baccalaureate program is to educate professionals who contribute significantly to the improvement of oral health.

Bachelor of Science (Dental Hygiene Specialization) graduates are more fully prepared to work in a large number of settings including, but not limited to private dental practices, research, education, industry, health care institutions or health promotion agencies. This degree prepares graduates to pursue post baccalaureate or graduate programs.

The Dental Hygiene curriculum includes courses from the Faculty of Medicine and Dentistry. During second, third and fourth year, students participate in field experiences in various community settings, such as hospitals, schools, and community agencies/clinics. Experience in an external clinic is required.

In addition to the Diploma curriculum consisting of a preprofessional year and years 2 and 3, Bachelor of Science (Dental Hygiene Specialization) students will complete a fourth year. During the fourth year, students will learn the foundation of research, expand their knowledge in health promotion utilizing principles and theories of learning, health care organization theory and interdisciplinary ethics. In preparation for the leadership and management roles, skills are enhanced through the didactic and dental hygiene clinical program. Additionally, the program will provide students with advanced practice opportunities.

The Dental Hygiene Program is approved by the Commission on Dental Accreditation Education of Canada. Successful students must complete the National Dental Hygiene Certification Examination (Canadian). Successful students in the Dental Hygiene Program are encouraged to write the National Board Dental Hygiene Examinations of the American Dental Association.

Further details may be obtained from the Director of the Dental Hygiene Program, Faculty of Medicine and Dentistry.

Orientation

It is mandatory that each student, after acceptance into the program, attend Orientation. This is scheduled immediately before the beginning of the first term of each year.

Course Requirements

The numbers following a course name indicate either the number of weeks assigned to the course or the number of hours spent in lectures, clinics and laboratories.

Diploma in Dental Hygiene

Year 2

- BIOC 200 - Introductory Biochemistry 39-0-0

- D HYG 201 - Human Anatomy 26-0-2
- D HYG 202 - Head and Neck Anatomy 26-0-2
- D HYG 207 - Dental Hygiene Theory I
- D HYG 208 - Dental Hygiene Theory II
- D HYG 209 - Dental Hygiene Theory III
- D HYG 212 - Preclinical Dental Hygiene
- D HYG 213 - Dental Hygiene Practice I 0-99c-3
- D HYG 221 - Concepts and Communication for Health Behavior Change
- D HYG 230 - Dental Anatomy
- D HYG 240 - Radiology 28-0-15
- MMI 133 - Medical Microbiology for Health Care Professionals 39-0-0
- OBIOL 202 - Oral Biology I 60-0-2
- PHYS 210 - Human Physiology 78-0-0

Year 3

- D HYG 313 - Dental Hygiene Practice II
- D HYG 316 - Dental Hygiene Care for Complex Clients
- D HYG 317 - Evidence for Dental Hygiene Practice
- D HYG 320 - Health Education and Leadership
- D HYG 322 - Population Health, Health Promotion and Community
- D HYG 326 - Periodontology for the Dental Hygienist 35-3s-0
- D HYG 329 - External Rotation 0-75c-0
- D HYG 340 - Dental Radiography 0-24c-0
- D HYG 386 - Anaesthesia 13-0-39
- OBIOL 302 - Oral Biology II
- OBIOL 305 - Pathology
- PMCOL 300 - Introduction to Pharmacology

Bachelor of Science (Dental Hygiene Specialization)

In addition to completing the Dental Hygiene Diploma program, students who enrol in the Bachelor of Science degree will complete Year 4 courses.

Year 4

- D HYG 413 - Advanced Practicum
- D HYG 414 - Addictions Awareness and Interventions for Tobacco Cessation
- D HYG 417 - Practice Management : Small Business and Entrepreneurship
- D HYG 418 - Long Term Care and Dental Hygiene Services
- D HYG 422 - Health Information and Policy
- D HYG 431 - Topics in Dental Hygiene
- D HYG 440 - Advocacy for Change in Healthcare
- D HYG 468 - Introduction to Research Methods and Critical Appraisal
- Two Options ★6 78-0-0

Note: (a minimum of one at the 300- or 400-level with the approval of Program Director) A maximum of ★3 from PAC courses is permitted.

Bachelor of Science (Dental Hygiene Specialization) Post Diploma Degree Completion Program

- A Bachelor of Science (Dental Hygiene Specialization) Post Diploma Degree Completion program will prepare diploma dental hygiene graduates to participate more fully and productively in a health care system that emphasizes prevention, primary care, accountability, quality and cost effectiveness. The dental hygienist with a baccalaureate degree is a leader in developing and initiating oral health interventions that prevent and control oral disease and promote oral wellness, and in facilitating change itself. The ultimate goal of a baccalaureate program is to prepare students to contribute significantly to the improvement of oral health goals in current and future health care delivery systems by preparing well-qualified professionals with knowledge, skills, and awareness at the baccalaureate degree level.
- The degree completion program will provide educational opportunities accessible to all qualified candidates tailored to the experienced dental hygienist, the adult learner and the distance learner.

Program A

Bachelor of Science (Dental Hygiene Specialization) Post Diploma Degree Completion Program: University of Alberta, Dental Hygiene Diploma Graduates of 1998-2001.

This program is intended for students who graduated from the University of Alberta Dental Hygiene Program between 1998-2001. Dental Hygiene graduates of 1998-2001 have completed the extended diploma curriculum. The degree completion program consists of the following courses:

- D HYG 417 - Practice Management : Small Business and Entrepreneurship
- D HYG 418 - Long Term Care and Dental Hygiene Services
- D HYG 431 - Topics in Dental Hygiene

- D HYG 440 - Advocacy for Change in Healthcare
- Two Options ★6 78-0-0

Note: (at the 300- or 400-level with the approval of Program Director) A maximum of ★3 from PAC courses is permitted.

Program B

Bachelor of Science (Dental Hygiene Specialization) Post Diploma Degree Completion Program: University of Alberta, Dental Hygiene Diploma Graduates (prior to 1998 as well as 2008 and forward) and dental hygiene graduates from other programs.

This program is intended for University of Alberta graduates prior to 1998 as well as 2008 and forward and diploma dental hygiene graduates from accredited dental hygiene programs in Canada and internationally.

The degree completion program consists of the following courses:

- D HYG 417 - Practice Management : Small Business and Entrepreneurship
- D HYG 418 - Long Term Care and Dental Hygiene Services
- D HYG 422 - Health Information and Policy
- D HYG 431 - Topics in Dental Hygiene
- D HYG 440 - Advocacy for Change in Healthcare
- D HYG 468 - Introduction to Research Methods and Critical Appraisal (or equivalent health research course)
- Four options ★12 156-0-0

Note: (with the approval of the Program Director, two at the 300- or 400-level) A maximum of ★3 from PAC courses is permitted.

Program C

Bachelor of Science (Dental Hygiene Specialization) Post Diploma Degree Completion Program: University of Alberta, Dental Hygiene Diploma Graduates (Year 2002 - 2007).

Graduates of the University of Alberta Dental Hygiene Program of 2002-2007 will be required to complete the following courses:

- D HYG 417 - Practice Management : Small Business and Entrepreneurship
- D HYG 418 - Long Term Care and Dental Hygiene Services
- D HYG 422 - Health Information and Policy
- D HYG 431 - Topics in Dental Hygiene
- D HYG 440 - Advocacy for Change in Healthcare
- D HYG 468 - Introduction to Research Methods and Critical Appraisal (or equivalent health research course)
- SOC 210 - Introduction to Social Statistics (or equivalent statistics course)
- Three options ★9 117-0-0

Note: (with approval of Program Director, two at the 300- or 400-level) A maximum of ★3 from PAC courses is permitted.

MD Degree

General Information

The program leading to the MD degree is conducted over four years. The curriculum committee is responsible for the overall design, management and evaluation of a coherent and coordinated curriculum.

Years 1 and 2 are the pre-clerkship years in which the material is presented in a series of system-based courses. Each course presents the material in a reasoned progression from basic information to clinical application. There are several coordinated courses, dealing with the social/sociological/public health and clinical skills aspects of medicine, which are scheduled throughout this period.

Years 3 and 4 are the clerkship years, commonly called the clinical clerkship. During the clerkship, each student must maintain a record of the number and variety of the student's clinical experiences, in order to ensure that the objectives of the clerkship have been met. Year 3 includes a Link course of 2 weeks, followed by clinical rotations totaling about 49 weeks. During this latter period there are also some opportunities for elective courses and vacation. Year 4 is a senior clinical year of approximately 34 weeks, which includes clinical rotations, electives, and a vacation period. Electives in the clerkship must be organized so that each student has an elective experience in a minimum of three different disciplines, each of which shall take place for a minimum of two weeks. Approved elective programs are available in diverse fields of medical science and practice.

Orientation

It is mandatory that each student, after acceptance into the program, attend Orientation. This is scheduled immediately before the beginning of the first term.

Course Requirements

Year 1

- DMED 511 - Introduction to the Profession
- DMED 512 - Infection, Immunity and Inflammation
- DMED 513 - Endocrine System
- DMED 514 - Cardiovascular, Pulmonary and Renal Systems
- MED 516 - Physicianship I (16 hours/week)
- MED 517 - First-Year Elective
- INT D 410 - Interprofessional Health Team Development (0-32.5-0)

Year 2

- MED 520 - Pre-Clinical Exam
- MED 521 - Gastroenterology and Nutrition
- MED 522 - Reproductive Medicine and Urology
- MED 523 (★6) (7 weeks)
- MED 524 - Neurosciences and Organs of Special Senses
- MED 525 - Oncology
- MED 526 - Physicianship II (12 hours/week)
- MED 527 - Second Year Elective
- MED 529 - Psychiatry

Year 3

- F MED 546 - Family Medicine Student Internship
- MED 531 - Physicianship III /Transitions (5 weeks)
- MED 543 - Integrated Community Clerkship
- MED 546 - Medicine Student Internship
- MED 547 - Clinical Electives (3 weeks)
- OB GY 546 - Obstetrics and Gynaecology Student Internship
- PAED 546 - Paediatrics Student Internship
- PSYCI 546 - Psychiatry Student Internship
- SURG 546 - General Surgery

Year 4

- MED 540 - Exams (9 hours)
- MED 541 - Physicianship IV /Transitions
- MED 555 - Geriatrics Student Internship
- MED 557 - Clinical Electives
- MED 558 - Emergency Medicine Students Internship
- MED 556 - Medicine Student Internship
- SURG 556 - Specialty Surgery

Certificate in Biomedical Research

The Certificate in Biomedical Research is offered by the Departments of Biochemistry, Cell Biology, Pharmacology, and Physiology. Students who pursue the certificate will be engaged in world-class biomedical research programs and will acquire a broad range of research skills through substantive laboratory course and independent research project experiences.

Students wishing to pursue the Certificate in Biomedical Research must discuss their program of study both with their own program advisor and, where different, a program advisor in one of the Departments of Biochemistry, Cell Biology, Pharmacology or Physiology. Completion of the certificate must be recorded with the Biomedical Sciences Undergraduate Education Committee at least one week prior to the application deadline for convocation (see Academic Schedule). Students wishing to receive the Certificate in Biomedical Research must also apply through Undergraduate Student Services in their home Faculty by the application deadline for convocation (see Academic Schedule).

Students may pursue the Certificate in Biomedical Research by fulfilling the existing requirements for their program and by completing at least ★18 in courses as follows:

- Presentation at a research day or conference either on or off campus.

A minimum of ★3 in senior laboratory skills courses selected from:

- BIOCH 398 - Research Project
- BIOCH 401 - Biochemistry Laboratory
- CELL 398 - Research Project
- PMCOL 301 - Introduction to Research in Pharmacology
- PMCOL 302 - Introduction to Research in Pharmacology
- PMCOL 337 - Experimental Procedures in Pharmacology
- PHYSL 310 - Experimental Techniques in Physiology

★3 - ★6 in courses which explore current biomedical research literature selected from:

- BIOCH 425 - Proteomics
- BIOCH 465 - Methods in Molecular Biophysics
- BIOCH 481 - Design and Construction of Synthetic Biological Systems I
- BIOCH 495 - Special Topics in Biochemistry
- CELL 405 - Cell Biology of Disease
- CELL 425 - Systems Biology
- CELL 445 - Current Topics in Cell Biology
- PMCOL 401 - Pharmacology Tutorial
- PMCOL 402 - Pharmacology Tutorial
- PMCOL 415 - Cardiovascular Pharmacology
- PMCOL 416 - Current Topics in Endocrine Pharmacology
- PHYSL 444 - Current Topics in Neuroscience
- PHYSL 466 - Undergraduate Tutorial
- ONCOL 425 - Advanced Topics in Cancer Research

A minimum of ★9 in directed research project(s) selected from:

- BIOCH 482 - Design and Construction of Synthetic Biological Systems II
- BIOCH 497 - International Directed Research Project
- BIOCH 498 - Directed Research Project
- BIOCH 499 - Directed Research Project
- CELL 498 - Research Project
- CELL 499 - Research Project
- PMCOL 498 - Pharmacology Research Program
- PHYSL 461 - Undergraduate Research Project
- PHYSL 467 - Undergraduate Research Project
- PHYSL 468 - Undergraduate Research Thesis I
- PHYSL 469 - Undergraduate Research Thesis II

Note: Students should plan the completion of the research certificate in consultation with the program advisor of one of the departments listed to ensure appropriate courses are taken.

Post-Professional Certificate BSc in Medical Laboratory Science

General Information

The Faculty of Medicine and Dentistry offers a program for degree completion for Canadian Society for Medical Laboratory Science general certificate holders. Because of the changing nature of the field, there is a practise requirement that must be met (see Admission).

The program requires ★75 additional study post-diploma and ★60 must be completed through the University of Alberta.

Program of Courses

Year 1

- BIOL 107 - Introduction to Cell Biology
- CHEM 101 - Introductory University Chemistry I
- CHEM 102 - Introductory University Chemistry II
- CHEM 164 - Organic Chemistry I **OR**
- CHEM 261 - Organic Chemistry I
- CHEM 263 - Organic Chemistry II
- MLSCI 244 - Pathogenic Microbiology I
- MLSCI 245 - Pathogenic Microbiology II
- MLSCI 320 - Analysis and Communication of Biomedical Information

- STAT 141 - Introduction to Statistics **OR**
- STAT 151 - Introduction to Applied Statistics I **OR**
- STAT 337 - Biostatistics
- Approved MLS options (★6)

Spring/Summer

- BIOCH 200 - Introductory Biochemistry
- BIOCH 330 - Nucleic Acids and Molecular Biology
- Arts options (★6)

Year 2

- MLSCI 410 - Introduction to Clinical Laboratory Management
- MLSCI 480 - Molecular Genetic Approaches to the Study and Diagnosis of Disease
- INT D 410 - Interprofessional Health Team Development
- Arts option (★3)
- Project course
- MLSCI 491 - Research Project
- **OR**
- MLSCI 409 - Research Project **AND**
- Science option (★3)

★12 chosen from

- MLSCI 420 - Emerging Trends in Medical Laboratory Science
- MLSCI 430 - Advanced Hematology
- MLSCI 460 - Clinical Biochemistry
- MLSCI 466 - Applied Toxicology
- MLSCI 475 - Clinical Immunology
- MLSCI 481 - Techniques in Molecular Biology
- MMI 405 - Advanced Microbial Pathogenicity **OR**
- MMI 426 - Medical Parasitology **OR**
- MMI 427 **OR**
- MMI 415 - Advanced Viral Pathogenesis