## **Faculty of Medicine and Dentistry**

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# 110 The Faculty of Medicine and Dentistry

### **Faculty Vision**

To be nationally and internationally recognized leaders investing in education, research and service, making important contributions to Health.

### **Faculty Mission Statement**

Dedicated to the optimization of health through scholarship and leadership in our education programs, in fundamental and applied research and in the prevention and treatment of illness in conjunction with Alberta Health Services and other partners.

#### **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 responsive to the health care needs of our communities.

Undergraduate Medical Education: www.med.ualberta.ca/education/ugme/mission.cfm

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

#### Strategic Initiatives

- (1) To provide the best environment for continuous learning and inquiry.
- (2) To be international leaders in advancement and dissemination of knowledge.
- (3) To create, in partnership with Alberta Health Services, an environment whereby health services delivery and the academic functions of teaching and research are optimized and of highest quality.
- (4) To create an environment which promotes respect, creativity, and recognition of all staff, students and residents.
- (5) To establish and maintain partnerships that advance our mission.
- (6) To maximize and efficiently utilize resources to achieve our mission.

#### **Values**

- Scholarship: We discover, interpret and disseminate new knowledge that promotes and restores health.
- (2) Respect, Compassion and Caring: We use these ideals to guide how we teach our students, care for our patients and work with our colleagues.
- (3) Integrity: We carry out our responsibilities to our patients, our students and our colleagues, maintaining the highest moral standards.
- (4) Excellence: We conduct our teaching, research and patient care, in accordance with the highest international standards.
- (5) Partnership: We work with our partners in education, research and health care for the greater good of the community.
- (6) Stewardship: We use our resources wisely.

#### **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	7
Number of Faculty (includes 12 FSO's)	732
Number of Administrative Professional Officers	26
Number of other (Academic Staff)	499
Number of Clinical Academic Colleagues	1,527
Number of Support Staff	1,218
Numbers of Students and Residents	
Medical Students	691
Medical Residents and Fellows	851
Dental Students	141
Dental Residents	4
Dental Hygiene Students	145
Medical Laboratory Science Students	83
Graduate Students: (includes 27 Neuroscience students)	566

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

#### 111 The Professors

#### **Teaching and Scholarship** 111.1

The Faculty of Medicine & Dentistry offers a number of outstanding educational programs including the Medical Degree, the Doctor of Dental Surgery, Dental Hygiene and Medical Laboratory Science. 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 \$190 million annually in peer-reviewed research funding. The Faculty enjoys national and international recognition in the form of numerous Fellows of the Royal Society (London and Canada), 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

UNIVERSITY OF ALBERTA

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

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Office of the Dean	Clinical Professors	D Muzyka
Interior Descri	DJ Cubitt R Hudson	S Nathan CJ Noble
Interim Dean V Yiu		A Nunes
	Associate Clinical Professors	T Ozelsel
Acting Vice-Dean, Faculty	RG Bergstrom	T O'Leary
Affairs D Kunimoto	R Brown M Buss	SA Olson
	M Buss A Chiarella	P Paetsch
Vice-Dean, Education	Y Csanyi-Fritz	BZ Petriw
F Brenneis	DB DuVal	S Rabuka
Vice-Dean, Research	T Eliasson	B Ramsey SJ Reid
M Michalak	LM Entwistle	H Reine
Chief Operating Officer	KA Faccenda	A Roopnundh
V Wulff	*CR Guenther	ZS Saleh
Associate Deans	LJ Huston	H Sandhu
W Dafoe (Continuous	*MS Jacka	L Scheeler
Professional Learning)	B Knight	MR Simmonds
B Fisher (Faculty Development	JT Lilley BE Marchak	D Snider
and Education Support)	S Paterson	l Sobolev
R Hayward (Health Informatics)	GA Perez	S Stetsko
T Hobman (Research Facilities)	RF Seal	J Taam CT
R Kearney (Postgraduate Medical	P Wildgrube	C Tang *C Torok-Both
Education) J Konkin (Community	TW Yeh	*D Townsend
Engagement)	Assistant Clinical Durfasson	CTwomey
T Krukoff (Research)	Assistant Clinical Professors B Achen	BP Unger
TK Lee (Clinical Faculty)	K Bateman	M Yukawa
M Lewis (Learner Advocacy &	J Belzil	0 Ziwenga
Wellness)	S Bhachu	Clinical Lecturers
B Rowe (Clinical Research)	E Bishop	M Auld
K Stobart (Undergraduate	BJ Bucyk	N Baldonado
Medical Education)	D Cave	L Baron
Assistant Deans	D Chen	MH Bercovich
A Grace (Development and	PG Cisar	R Bowman
Alumni Affairs)	MR Cohen	A Brown
M Moreau (Admissions)	D Cubitt	C Cave
W Wong (Postgraduate Medical	BP Delbecq	D Charles
Education)	K Doyle JM Dupuis	JR Charlton A Cheng
T Hillier (Undergraduate Medical	S Eeson	J Fuger
Education)	M Ewanchuk	M Hogan
Fa aultu	V Ford	JC Hrazdil
Faculty	A Freed	N Kembhavi
Departments	*F Gragasin	J Klinck
	AS Guest	M Lalonde
Anesthesiology and	S Gupta	J Largoza
Pain Medicine	DA Hardy	D Leighton-Lane P Lin
Chair and Professor	R Haugen	B MacNicol
M Murphy	LY Huang V Jensen	E Man
Administrative Officer	DT Jolly	L McGowan
J Jubinville	N Klassen	L Nadeau
Professors	JP Koller	L Nadwidny
BA Finegan	J Krancjevic	L Noonan
DP Gray	*B Kropelin	C Osmond
RA Kearney	P Kulkarni	J Popoff
B Tsui	ER Lazar	OJ Schneider
M Zaugg	T Leung	S Singh
Associate Professor	J Lujic	G Smith
S Rashiq	IA MacDonald	J Soong R Taggesell
	C Mack	n iayyesell

Assistant Professors

**B** Dick

**B** Kerr

D Dillane

V Maragh

P Matthey

JA Moir

DA Mercereau

D Terblanche

I Wachowski

O Wensveen

### **Professor Emeritus**

BT Fincuane

**Adjunct Clinical Professors** C Eagle W Etches

**Adjunct Assistant Clinical** 

Professor A Chuck

#### **Biochemistry**

**Chair and Professor CFB Holmes** 

Assistant Chair, Administration C Iwanicka

Professors RC Bleackley DN Brindley

J Casey \*CE Cass MJ Ellison L Fliegel JNM Glover \*R Godbout MNG James BD Lemire \*L Li A MacMillan RN McElhaney M Michalak

MC Schultz JC Stone **BD** Sykes \*DLJ Tyrrell DE Vance JH Weiner \*D Westaway

**Associate Professors** C Fernandez-Patron \*B Hazes

I Schang L Spyracopoulos D Stuart H Wille H Young

**Assistant Professors** 

\*S Bakash R Fahlman IS Gopina J Lemieux N Touret \*D Zhang

Professors Emeriti WA Bridger

JS Colter **RS Hodges** CM Kav NR Madsen VH Paetkau P Scott LB Smillie

**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 **RB Thompson** 

Assistant Professors \*F Dolcos \*D Gross

\*S Kalra \*L Le N Malykhin

Professors Emeriti

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

**Adjunct Professors** S Adeeb

A Amirfazli CJ Backhouse Y Belhamadia D Bennet J Campisi J Carey J Chen D Collins A Cook N DeZanche MR Doschak H Fenniri F Fenrich K Fouad JO Hahn KF Iones G Kawchuk ZJ Koles D Krushelnycky Dli EHM Lou W Moussa M Olson

NG Shrive H Uludag L Unsworth **B** Wright A Yahva J Yang

RJ Zemp

#### Cell Biology

**Chair and Professor** RA Rachubinski

**Administrative Officer** 

KM James Professors

L Berthiaume **RB** Campenot \*WJ Gallin T Hobman \*R Lehner P Melancon \*D Pilgrim Z Wang R Wozniak

Associate Professors G Eitzen

V Mushahwar M Pasdar T Simmen A Simmonds

**Assistant Professors** J Dacks

\*S Hughes P LaPointe Professors Emeriti TL Krukoff RS Smith

Dentistry

Chair and Professor PW Maior Vice Chair

TR Stevenson Associate Chair (Academic)

UNIVERSITY OF ALBERTA

S Lalh

J Leakey

VP Lee

**B** I inke

JLockau

S Lockwood

D Lunardon

C MacDonald

DJ MacDougall

K Manning

I R Moore

**BR Neumann** 

W Preshing

W Primrose

A Sneazwell

E Steinbring

R Pratt

K Steyn

N Thie

MT Taciuk

J Valentine

WG Wesner

P Williamson

T Lee-Knight

SK Patterson

Associate Chair (Dental Hygiene) S Compton

Associate Chair (Research)

- Acting DN Dederich **Assistant Chair** (Administration) Y Pinchbeck

**Curriculum Coordinator** G Gaudet-Amigo

Professors S Compton DN Dederich FM Eggert LW Kline PW Major WT McGaw NC Milos DJ Pehowich **E** Peters KM Poliikoshko

**Associate Professors** C Cable S Cobban T El-Bialy C Flores-Mir G Heo U Nassar R Talwar SK Patterson HK Tan

**Assistant Professors** M Amin

A Chow Y Torrealba **Clinical Professors** R Cox

B Gitzel D Gotaas FA Krause R Kreutz K Lung M Parfitt D Pettigrew J Ritchie C Robinson P Schulte JA Scott TR Stevenson **EW Tunis** KW Wong CC Yu

DC Yu

G Zenith

Associate Clinical Professors

M Armstrona DH Redard BS Bennett C Blackman N Chalk LC Chan R Croutze CK Fialka-Eshenko P Gainer S Ganatra K Habib M Howell D Kelner D Kemp **B** Kucev

FWI Kwan

Rlabahn

HC Yu

(Yui

**Clinical Instructors** 

A Abd-Elmeguid

S Al-Daghreer

M Al-Saleh

N Alsufyani

S Aneca

B Aucoin

S Aurora

G Baron

R Beesley

S Bennett

B Bergh

S Bhambhani

R Bothwell

J Boucher

D Brown

J Brown

J Caouette

E Carrasco

K Cheng

J Clarke

D Coffin

D Correia

**B** Crowley

T Dawson

T Debevo

D Dietz

E Dionne

S Fisher

N Fleming

W Flemina

D Goudreau

R Graham

B Hoyano

A Hussain

C Ironside

J Jacob

G Jansen

B Kan

N Kaipatur

F Kassamali

D Kawahara

D Kemp

A Khullar

**B** Knight

Z Kurji

R Lau

Clee

D Lesniak

I Hucal

G Grykuliak

M French-Theoleyre

D Demchuk

K Currie

M Alsulaimani

**Assistant Clinical Professors** 

A Alsagheer S Ash T Aucoin K Bapoo-Mohamed M Bennett I Rest M Rochinski T Carlyle K Cheng J Cornish W Dewar F Didich D Eliuk K Farrell S Heglund I Hernandez A Hoh

S Houshvar I Huk L Hursin E Jang L Kamelchuk I Kornerup E Kucev **B** Kula M Kun

M Lagravere S Lee D Lunardon W MacKinnon I Mah V Mak C Martin-Neumeyer D Neale B Nordstrom N Palmer M Pokrov

R Pratt J Pruner R Reiter D Ricioppo R Schafers A Senior A Sheppard A Sneazwell K Sperling

S Switzer A Tam **B** Ulmer T Vankka T Verhaeghe D Vincelli L Voltner K Weiss-Gutscher J White H Woo M Wright

P Wu

J Yacyshyn

D Yeuna

K Lim K Lobay D Lobb TLodwig MA Mandich L Mar J Margolus H Massini I McKee J McNab B Mitchell 0 Mohammad G Mohr T Morgan N Mostafa S Morton J Na S Oshanyk M Pokroy K Raczynski L Riemer M Rodaers S Russett M Salehyai H Saltaji K Sauze

M Senye

R Sileikyte

E Specht V Spicer K Stevn C Story R Straga M Susoeff U Szkudlarek L Taylor R Teply **S** Thawer S Thomas L Torgerson D Tsujikawa D Van Elsande L Voltner A Whistance-Smith D Wolle **B Wong** 1 Wood S Wyzkoski A Yeh J Yu M Zell M Zenith

S Smith

Professors Emeriti BK Arora HM Dick HE ElBadrawy KF Glover WT Harley WC Meyer CJ Osadetz JW Osborn DM Paton I Pimlott IM Plecash GW Raborn PD Schuller DA Scott GH Sperber GW Thompson NK Wood

#### **Emergency Medicine**

Chair and Professor **BR Holroyd** 

Professors M Bullard C McCabe **B** Rowe

Assistant Professor K Dong

Clinical Professors R Lee I Sim TD Sosnowski

Associate Clinical Professors MA Cherniwchan

**GE Cummings** E Dance S Dong J Franc-Law T Graham W Patton W Sevcik DL Shragge S Sookram

**Assistant Clinical Professors** D Bond HA Borkent MJ Boulanger JJ Brown R Cunningham F Dance CGM Evans R Hansen P Jain R Kruhlak K Lam M Lona M Mackenzie M Mrochuk

T Durec

T Du Toit

V Duta

S Edani

C Ellis

MS Eckhart

\*B Edgecumbe

MS Elmusharaf

TN Erickson

D Fthier

M Easwara Murthi

#### UNIVERSITY OF ALBERTA

AL Gainer

CR Ginales

\*MS Gross

RS Hauptman

CD Hodgson

ES Holmes

K Jahangir

RB Kaasa

H Kammerer

\*RT Kruhlak

DW Korzenowski

**RA Halse** 

K Ghali

SA Backlin

B Bahler

**IH Bailes** 

JL Baker

\*DI Barer

EA Barker

P Barrett

JB Barsky

N Bector

K Bennett

\*F Berdusco

JE Bergens

S Beshai

A Bhimii

JD Bly

PJ Bouch

RM Buck

LA Buhr

**EA Button** 

GL Campbell

**KB Cardinal** 

TJ Byers

11 Carter

DB Cave

DR Chan

JSK Chan

HS Chana

M Chapelski

I Chatteriee

M Chaudhry

J Cheung

R Cheung

**B** Chew

AYL Chiu

PK Chiu

K Chow

JT Chmelick

DB Christensen

J Chronopoulos

Z Chrzanowski

WG Church

CJ Claasen

NN Chychota

ME Chisholm

MR Cassim

HG Bowden

MA Bowland

S Bhardwai

**BAJ Binette** 

GM Bokenfohr

L Bernier-Lycka

A Bertagnolli-Hansen

PE Bell

AR Murray DF Stewart \*A Naismith F Voon D Watrich R Oland DC Perry C Westover J Williams \*K Peterson R Wittmeier SA Poplawski RA Purser R Yao A Yeung C Rabuka M Rico AD Yeung A Sibley M Young W Thirsk Adjunct Professors A Ushko 1 Francescutti AF Walker

**Clinical Lecturers** 

E Alonso D Ariano C Anaelski D Barer R Arent E Berdusco S Curtis J Bitangcol A Dixon T Braun M Enarson L Burkart \*L Evered G Butler S Greval E Chang H Jou J Chang M Kundra M Oliva M Chen S Chow J Sullivan K Cromwell L Tchir T Turner A Cunniffee TM Curry D Wheeler **B Windwick** R Daloise M Yarema E Dance B Deane

P Delaney **B** Edgecumbe S Fisher

S Flanagan K Foster D Ha A Hanson

S Haque K Harris 1 Hillier D Hoshizaki D Hryciuk M Inwood S Jones

Professors A Kabaroff NR Rell C Kjelland A Cave N Lam **BM Dobbs** P Linehan MG Donoff K Lobay C Lucyk DG Moores A Lund 1 Triscott G Luna

R MacDonald C MacGougan S MacLachlan K Mangan J McKague K Mcl elland G Meikle A Mirza J Mohler

W Molberg M Moss DW Neilsen K Neilson D Ross LK Nguyen J Norum D O'Brien P Parks CI Peterson M Cave D Reid

R Rosenblum S Ross A Rothney D San Agustin G Scheirer R Scheirer L Sharma R Sherman R Singh F Soibelman A Stagg

TF Stetsko

I Steiner **Adjunct Assistant Professors** 

D Allain

**Associate Adjunct Professors** 

W Craig D McConnell D Nichols **LVicas** P Yoon Family Medicine

**Chair and Professor** GR Spooner

Administrative Officer M Perreault

P Humphries

**Associate Professors** 

GM Allan FR Brenneis D Campbell-Scherer S Hughes F Janke D Klein MR Kolber J Konkin C Lebrun D Manca D Nichols I Parmar S Schipper L Steblecki

**Assistant Professors** C Cardinal

L Charles AS Khera S Koppula C Korownyk M Levy J Peng S Ross G Salvalaggio A Tan

**Clinical Professors** FW Armstrong SK Auna

AE Ausford G Blais JF Chiu I Colliton \*TFX Corbett \*NP Costigan N Flook K Gardener TD Kolotyluk EP Schuster \*TD Sosnowski A Taube B Ward H Woytiuk H Zirk

**Associate Clinical Professors** JB Armstrong

PMD Armstrong AL Bailey **BV Bril**z J Bromley R Brownoff D Brox \*MA Cherniwchan WE Clelland \*GE Cummings NAC Da Cunha AC Gigg \*T Graham JJ Hankinson N Hans HR Hindle M Hurlburt D Kent **GA Lamoureux** CJ Lord KAH Lundgard B Lycka LM Ma BK McPeak

BJ Millar AM Milne-Epp R Naiker EW Papp \*WF Patton M Reedvk BD Ritchie JM Robinson M Rose

\*DL Shragge S Simon A Spak RJ Wedel **BRR Whittaker Assistant Clinical Professors** 

M Ahhasi KJM Abel **G** Ahmed T Bakshi DH Banmann D Behn Smith JE Bell \*DW Rond M Boorman \*HA Borkent \*M Boulanger BW Boyko TB Bray \*JJ Brown

MI Caffaro PA Caffaro R Carter J Caulfield SW Chambers D Corby JE Craig \*R Cunningham WJ Daviduck KKD Dinyari LD Dujon LR Edwards \*CGM Evans

SM Fairgrieve-Park

TF Flanagan

T Fung

D LaBuick MW Langer \*DL Larose R Laughlin HR Laverty DM Leung MR Lidkea K Loeffler \*MJ Long C Lopaschuk SE Low LE Mann-Hosford A Marin RA Martin T McKeown DP Miller MB Moran **EM Mori-Torres** S Murji \*AR Murray A Naismith ED Ndovi RL Oishi K Peterson \*SA Poplawski \*R Purser TF Ranieri N Rao JG Reilly \*M Rico C Rowntree S Samuel WF Schneider G Schwalfenberg CA Sikora MR Smith S Soehn RM Stepanko H Sternberg

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**IJ Argals** 

D Ashton

K Atchison

I Atkinson

H Bablitz

L Au

J Stickney-Lee

S Thompson

\*AW Ushko

PM Verones

DR I Vincent

SR Ulan

J Clarke L Coetzee PR Comeau JR Corrigan P Coulson RF Crowe S Crum H Cuddihy C Cull M Currie JA D'Costa DO Dada MC Darby K Darcel TS Darnell S Datar RG Davidson W Dawson \*BC Deane T Defreitas E Denga LM Der H de Ridder AR de Souza WT De Vos GS Dinsa A Draginda M Dry D Duffy B Dufresne

GS Dulai

I Dunkin

RH Dunhar

DI Fyans DG Faulder LA Fernando DW Fields **BL** Fischer \*SD Flanagan C Foolen JS Fowke AB Franke KE Game CM Gannon AS Garbutt SC Ghitter-Mannes JM Godel AB Gokul CG Gordillo A Gossmann A Goswami R Gounden RJ Gregg RI Greidanus RJ Hackett J Hamm VM Hanlon AC Harmse DA Hasinoff M Hauntfleisch BC Hayden TL Heisler S Heydenrych J Hirji WD Hogarth J Holm Jhass SM Hood \*DJ Hryciuk KW Hult **HS Irvine** S Jabbari-Zadeh PA Jansen L-A Jansma AJ Jarema A Jeraj AL Jerome PM Johnson CG Johnston S Karpman D Kasayan I Kassam JS Keay RE Keller CJ Kendall

A Khan

OT Khan-Afridi

M Khurana

RL Kijewski

DG Killick

BL Kinash

M Kirwin

AM Kohler

VD Krinke

SG Kroeker

LM Kulak

AL Kutash

RA Lamoureux

EP Landsbergen

CR Lavoie

RI Leonard

PHIewis

AS Lee

JH Lee

P Kwan

MIal

KM Koliaska

P Kivi

S Kibria

GD Prince

1 Prins

\* M I Young

J Yue

#### B Li NA Radomsky ELi R Rajput ZLi PK Lindsay FHIo RM Loiselle BM Long **BL** Lorrain SS Lou AJ Louw CI MacCarthy IR MacDonald BA Macedo DW Maclver T Madzimure SS Malik S Manchikanti M Maneshgar \*K Mangan MG Mannarino JP Mare PA Marner **BW Martin** KAC Martin GG Mazurek K McBeath M McCall JG McCallum DM McCarty A McDonald KD McFarlane C McKibbin NE McNeilly KL McNicol D Millard S Minnett JR Minsos GC Moe RA Moffatt ZA Mohamed \*JA Mohler \*W Molberg NJ Morison MK Morrison MP Morros SM Moussa JM Muller JD Murphy O Naidoo MR Nawrot S Needham \*KD Neilson **RAJ Neuls** PJ Newnham LP Nguyen MJ Nizam AE Noga **BC Nwaka**

J Ramlall J Ramsahoye G Ramsay NP Rattan JC Regehr D Rengan JD Ritchie JC Routledge DR Rvan A Sadin IM Sametz GM Samycia M Sapozhnikov JJ Saunders A Savani MR Sayeed \*GD Scheirer JE Schimpf B Sereda N Shahoo S Shakil MTL Shandro \*RK Sherman R Shute HS Sidhu **RJ Simard** A Singh V Smith D Smyth CM Soneff P Sonpar KJ Sorenson **TPW Souster** OA Soyege B Sreenivasan WB Steed \*TP Stetsko \*DF Stewart FM Steyn A Swinton T Taiwo MJ Thain L Thomas LB Torok-Both R Torrie T Tran JE Tse SA Tsikata RL Turner SL Turner JBA Unger ZAN Van Den Heever JP Van Der Westhuizen SA Van Zyl L Venter M Vilioen JS Voldeng J Obst RG Warren JA O'Connor VM Warren OD Odugbemi W Wash SO Ogbeide J Weaver OS Oladele DS Welch \*CN Westover CF Olson P Ondrus RIWhite WDL Orr **RM Wiens R Willis** C Otto LA Willox SE Oyama P Palma TM Withers AD Witten P Paludet BL Wood CD Parameswaran DJ Paras JL Woodruff TA Peebles KW Worry LD Pernisie S Yaltho DL Yamabe \*EB Persson M Yan B Pezeshki LM Pfeifer S Yao TJ Phillips MA Yatscoff CA Phillpot \*AK Yeung **BL Piepgrass** J Yeung HM Plucinska TTC Yeung M Poitras J Yoneda CT Yoo AJD Pope

DK Zakalasky JM Zielinski Professors Emeriti **RG Chaytors GL** Higgins I Steiner

**Faculty Service Officer** 0 Szafran

**Adjunct Professors** DJ Clandinin RL Fainsinger N Gibson B Holroyd P Jacobs N Keating A Sales E Waugh

**Adjunct Associate Professors** 

S Esmail DL Myhre N Shaw **B Williams** 

Adjunct Assistant Professors

D Naidu C Poth

Care of the Elderly Director and Professor J Triscott

Clinical Professor H 7irk

Associate Clinical Professor

LM Ma **Assistant Clinical Professors** 

M Abbasi H Kammerei A Marin MB Moran FM Mori-Torres N Rao S Samuel J Stickney-Lee L Wasilenko

Clinical Lecturers S Ahmadinejad A Bertagnolli-Hansen I Gounden

Al Jerome M Khurana P Kivi AL Kutash RL Leonard Rli ELi Z Li BM Long C Otto

R Pezeshki T Taiwo J Weaver

Laboratory Medicine and Pathology

**Acting Chair and Associate** Professor

M Mengel

**Administrative Officer** 

JL McPhee **Professors** FJ Bamforth \*P Campbell J Hugh R Lai XC Le XF Li LE McGann \*TW McGaw \*I M Pilarski \*J Preiksaitis RP Rennie C Sergi K Solez \*AR Turner G Tyrrell

UNIVERSITY OF ALBERTA

Associate Professors I Acker GS Cembrowski B Chiu

LWL Chui S Damaraju J Deschenes ES Johnson R Kumar J Martin M Mengel S Nahirniak XL Pang L Puttagunta DC Rayner

LJM Russell Assistant Professors J Bacani J Fuller

\*E Leslie MN Mahmood P Makarla L Shier B Sis A Szkotak

R Lena

A Thiesen **Clinical Professors** RC Berendt G Clarke P Colhourne DTP Dawson **GP** Dowling J Hannon TE Higa T Higgins **GH Johnson GR** Jones DW Kinniburgh

A Lacson DF LeGatt C Prosser \*EH Schloss JR West

Associate Clinical Professors

S Anwar H Berendt **G** Bigras G Blakney JM Danyluk RS Davev WF Dong \*S Ganatra S Girgis M Kattar

K Kowalewska - Grochowski **GD Neuman** C O'Hara N Rayani M Saddick N Satkunan A Sauvageau S Silverman ICF Sin

\*JA Talbot Assistant Clinical Professors J Ahmed-Bentley K Alanen

LM Aye B Balachandra **B** Bannach A Bano S Brown T Chaba S Chan I Chaudhry S Chow

C Ewanowich

**HL** Gritter C Hunter I Hwang Clspas K Khetani S Kulkami MC Lee MW Lee PL Letendre N Lilic JO Lu VI McCann DR McLean R Onell S Puttaswamy A Reid R Rivera A Schell K Schnabl G Sigurdson

GO Wood G Zahariadis Clinical Lecturer

A Sim

J Slatnik

D Tung

K Wong

S Sihra

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J Baron A Bistritz D Bruce B Campbell J Carscadden K Cheung S Crowther J English S Greenspan BD Guspie

BU Guspie T Hillier R Holub T Horwitz M Janoski A Kanigan WG Keenan T Kotylak A Kumar A Kwan

A Kwan N Lakis K Lee B Ling C Lummer R MacEwan KG Magnus M McCarthy D McCarthy D S Naik E Niven

W Parker L Paskar V Patel R Pereira EJ Preville KN Puznak B Rawat H Shein R Sherlock H Sidhu

M Smerdely T Spiers W Sugars JF Swersky AS Tang B Taylor R Turner G Van der Merwe B Ward C Winter

T Yeo **Clinical Lecturers** S Bhutani T Black C Crawley H Dhliwayo CG Elias J Fingard A Halliday M Hudson IP Hvde M Janicki S Kitay P Koziarz K Leung CLywood

JP Hyde
M Janicki
S Kitay
P Koziarz
K Leung
C Lywood
S Manji
NE Maslo
I McKerlie
E Ngan
R Pawluk
P Sarlieve
M Scott
DA Shamchuk
A Singh
E Sonnex
P Spiers

CTorbiak

D Williams S Winters

Clinical Instructor F Kozin

Professor Emeritus DB Russell

Nuclear Medicine
Program Director and
Assistant Clinical Professor
C Winter

Assistant Professor J Abele Professor

Associate Clinical Professors

M Hoskinson H Jen C Maguire M OʻKeeffe RS Warshawski

\*AJB McEwan

Assistant Clinical Professors

B Ling AS Tang B Taylor C Winter Surgery

Chair and Professor DM Hedden

Senior Director, Equity and Faculty Development C DeGara

Senior Director, Surgical Research EE Tredget Senior Director, Undergraduate Education

Senior Director, Postgraduate Education

E Wright

Director, Graduate Studies
T Churchill

Health Informatics, Innovation and Technology T Winton

Assistant Chair, Administration D Titley

Senior Development Officer

S McCoy

Cardiac Surgery
Director and Clinical

Professor D Ross Assistant Professor S Meyer

Clinical Professors A Koshal JC Mullen \*IM Rebeyka DB Ross S Wang

Associate Clinical Professors

CR Guenther R MacArthur DL Modry

Assistant Clinical Professor

H Buchholz

Adjunct Professors WD Chins \*DE Johnstone \*LJ West Assistant Adjunct Professor

CM Norris

General Surgery
Director and Associate

Professor D Williams Professors DL Bigam

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

Associate Professors JS White DC Williams

Assistant Professors RJ Brisebois K Buttenschoen E Haase S Karmaili R Khadaroo T McMullen D Schiller S Widder

Clinical Professors KD Dabbs RA Hallgren DW Jirsch WJ Mackie MH Stephens

Associate Clinical Professors DO Adams M Chatenay HR Chyczij PD Davey \*MG Evans BW Johnson GM Lees MA Meier

GM Lees MA Meier EA Plewes C Sample WM Struck

Assistant Clinical Professors

K Alibhai
D Berg
D Callahan
J Kennedy
JD Matheson
AVF Sobey
D Sutherland
AF Trautman
RG Turnbull
GB Winkelaar
WJ Yakimets

Clinical Lecturers ST Mortimer H Wang

Professors Emeriti KL Bowes RAL Macbeth GW Scott OG Thurston WW Yakimets

Adjunct Professors \*TW Theman P Wales \*AH Walji

Adjunct Assistant Professor

S Issa

Neurosurgery

Director and Associate Clinical Professor K Aronyk

Clinical Professors JM Findlay JDS McKean KC Petruk

**Associate Clinical Professors** Professor KE Aronyk RJ Fox V Mehta JR Harris DE Steinke E Wright Assistant Clinical Professors

RW Broad MM Chow V Mehta AKY Nataraj BM Wheatley

**Professor Emeritus BKA Weir** 

Orthopaedic Surgery

**Director and Associate Clinical Professor** DD Otto Professor

\*DM Hedden **Associate Professor** NM Jomha

Assistant Professors A Adesida \*M Clark \*SK Dulai H Jiang M Menon

Clinical Professors RM Glasgow DWC Johnston \*MJ Moreau

**Associate Clinical Professors** RA Balyk

IG Cinats PMK Leuna DD Otto GG Russell

**Assistant Clinical Professors** 

**GD** Arnett J Bergman MJ Bouliane D Dick GR Goplen **RL Henderson** LF Hunka FB Kortbeek A Lalani GJ Lavoie MV Lavoie EC Masson JF McMillan

GJ O'Connor A Scharfenberger DM Sheps **RE Stiegelmar** DW Weber

**Clinical Lecturers** J Bury RRM Glasgow BJ Greenhill

PJ Paul **Associate Adjunct Professors** L Beaupre

C Lebrun WA Moussa

**Assistant Adjunct Professors** 

\*JS Hebert D Hill WM Lou \*DI Naidu E Parent V Raso

Professor Emeritus

DC Reid

Otolaryngology Director and Professor H Seikaly

J Wolfaardt

Associate Professors

Assistant Professors K Ansari A Ho M Osswald \*TC Uwiera

Clinical Professors CS Carter WH Kudrvk

Associate Clinical Professors JD Keohane

R Liu

**Assistant Clinical Professors** MW Allegretto

IC DiTonna Clinical Lecturer JA Kostiuk

**Pediatric Surgery Director and Professor** 

W Cole Professors W Cole DM Hedden

**Assistant Professors** F Berry I Bratu B Dicker SK Dulai D Kiddoo PD Metcalfe I Olson J Pugh TC Uwiera

Clinical Professors M I Moreau IM Rebeyka \*GH Wilkes

**Associate Clinical Professors** \*KE Aronyk H El-Hakim MG Evans GM Lees IK Mahood JB McIvor Clinical Lecturers EC Eksteen

R Seemann Adjunct Assistant Professor J Norton

K Sabri **Plastic Surgery** 

**Director and Clinical** 

Professor GH Wilkes Professor EE Tredaet

Assistant Professor \* I Olson

Clinical Professors A Jarman **GL** Lobay GL Moysa GH Wilkes

Associate Clinical Professors DD Campbell

G Louie M Morhart **Assistant Clinical Professors** 

DC Edwards M I Giuffre T Hayashi T Riegel

Clinical Lecturers TF Chong R Grover BM Mehlina J Wolfli

**Professor Emeritus** JDM Alton

**Adjunct Professors** L McGann S Nagata

Assistant Adjunct Professor

Surgical Medical Research Institute

Director and Professor **RV** Raiotte

Surgical Research **Director and Professor** EE Tredget

Professors GS Korbutt **RV** Rajotte EE Tredget

Associate Professors B Agrawal CC Anderson TA Churchill

**Assistant Professors** G Ravat

Faculty Services Officer LF Zhu

Professors Emeriti KP Kowalewski GW Scott DC Secord

**Adjunct Professors** P Cheuna MP Mintchev \*RW Yatscoff I I West

Thoracic Surgery

**Director and Associate** Professor K Stewart

Associate Professors KC Stewart TL Winton

Assistant Professor F Redard

**Assistant Clinical Professor** A Valji

**Urological Surgery** 

**Director and Clinical** Professor GT Todd Professor RB Moore

Associate Professors KF Rourke GT Todd

Assistant Professors NE Jacobsen \*D Kiddoo \*PD Metcalfe T Schuler Clinical Professor

MP Chetner Associate Clinical Professor

DR Mador Assistant Clinical Professors

RP Ahele B Bochinski DJ Bochinski **EP Estey** HJ Evans GJ Gray M Hobart

MN Weisler

TA Wollin

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Professors Emeriti WH Lakey MS McPhee JO Metcalfe JB Metcalfe

Associate Adjunct Professor KN Moore

**Faculty Divisions** 

Anatomy

**Acting Director and Professor** AH Walii

Professor DA Begg

Associate Professors P Lemelin D Livv

**Assistant Professor** C Webber

Adjunct Associate Professor \*L Satkunam

Professor Emeritus K McFadden

**Community Engagement** 

Associate Dean and Associate Professor J Konkin

Program Directors

Professor and Director, Office of Global Health D 7akus

Associate Professor and Director, Office of Rural & Regional Health F Janke

Manager, Physician Learning Program

**Assistant Professor and Director, Community Engaged Research** 

K Andony

**Continuous Professional** Learning

Associate Dean and Associate Professor W Dafoe

**Adminstrative Officer** K Edwards

Rural Physician Advisor T Kolotyluk

RCPSC CPD Educator H Hoffman Director, Medical **Acupuncture Program** 

S Auna

Associate Director, Medical Acupuncture Program H Jou

Director, Physician Learning Program C de Gara

Vacant (Indigenous Health) Vacant (Inner City Health)

Critical Care Medicine

**Director and Professor** RTN Gibney

**Administrative Officer** Llubinville

Professors WD Chin \*E Tredaet

**Associate Professors** PG Brindley \*L Cheung DJ Kutsogiannis Assistant Professor

SM Bagshaw **Adjunct Assistant Professors** 

\*R Brisebois \*C Karvellas \*R Khadaroo \*S Widder Clinical Professor **RG Johnston** 

**Adjunct Clinical Professor** \*N Gibson

**Associate Clinical Professors** \*S Duggan CR Guenther M Heule \*C Johnston R McDermid

M Meier W Murtha S Reynolds \*MH Stephens DE Stollery

A Liu

**Assistant Clinical Professors** 

\*WR Martin \*J Misiaszek I Davidow \*P Nguyen D Djogovio \*KG Pearson M Ewanchuk \*D Pilgrim M Henry \*C Power D Hudson M Jacka \*A Shuaib B Kropelin \*PA Smith \*S Marcushamer \*D Treit D Markland \*A Tse JD Matheson \*F Tse S Norris \*R Weyrick A Romanovsky \*D Wylie E Rokosh \*J Yager A Shustack \*J Yang

M Simmonds G Singh W Sligl A Sobey G Suen D Townsend C Torok-Both M Zibdawi

P Engels D Paton-Gay **Health Sciences Laboratory Animal** 

**Adjunct Clinical Lecturers** 

Services Director

RE Uwiera

W Austin

**Faculty Service Officers** N Bosvik D Domahidi **G** Parks

John Dossetor Health **Ethics Centre** 

Interim Director and Clinical Professor P Byrne Professor

**Associate Clinical Professors** 

\*P Brindley \*C Els \*AR Joffe

Assistant Clinical Professors \*B Leier

\*C Mack Professors Emeriti V Bergum JB Dossetor

**RJ Sobsey** 

**University Centre for** Neuroscience

Director and Professor KG Todd

Professors \*N Ashworth \*GB Baker \*K Ballanyi \*C Beaulieu

\*D Rennett \*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 Marai

\*A Prochazka \*P Silverstone

**Associate Professors** \*DW Ali \*CA Roliek \*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 Siddiai \*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

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\*C Rasmussen
\*Y Sauve
\*A Singhal
\*S Sipione
\*C Sturdy
\*C Webber
\*S Wiebe
\*I Winship

Adjunct Professors

\*J Norton

Adjunct Assistant Professor

1 Doicos

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

Faculty Service Officer
\*C Hanstock

Physical Medicine and Rehabilitation Medicine

Director and Associate Professor S Gray Professors

N Ashworth L Satkunam Clinical Professors

LA Bellamy (Emeritus) M Watt Associate Professors KM Chan

I Hebert

D Naidu S Yablon Associate Clinical Professo

Associate Clinical Professors M DiPersio JB Guthrie

Assistant Clinical Professors

E Sampson J Townsend C Tuchak S Zaki

Clinical Lecturers

S Paleksic M Prowse R Thiara Adjunct Professors W Dafoe N Dean \*RB Stein

**Professor Emeritus** T Gordon

Division of Support and Studies in Medical Education

Professor and Associate Dean, Faculty Development and Education Support BW Fisher

Adjunct Associate Professor and Director, Assessment and Evaluation D Harley

Associate Professor and J Alan Gilbert Chair in Medical Education Research C Hodgson

Assistant Professor and Director, Arts & Humanities in Health & Medicine P Brett-MacLean

Educational Associates
\*FR Brenneis (Vice-Dean,
Education)
\*C He Gara
\*MG Donoff (Family Medicine)
\*R Kearney (Associate Dean,
Postgraduate Medical
Education)
\*N Leonard (Genetics)

\*L Miedzinski (Infectious Diseases) \*J Parmar (Geriatric Medicine) \*DC Rayner (Laboratory Medici

\*DC Rayner (Laboratory Medicine and Pathology) \*B Roed \*M Sagle (Obstetrics and

Gynecology) \*L Saxinger (Infectious Diseases) \*K Stobart (Associate Dean, UME)

Professor Emeritus G Goldsand

Centres/Institutes www.med.ualberta.ca/Home/ AboutUs/units.cfm

## Additional Members of Faculty Council

President and Vice-Chancellor IV Samarasekera, O.C.

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

Dean, Faculty of Physical Education and Recreation One representative, Faculty of Science

One medical librarian

## 112 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.

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**

- 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) 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.
- (7) Programs leading to accreditation by the College of Family Physicians of
- (8) 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.
- (9) An extensive program of continuing medical education for physicians practising in northern Alberta.
- (10) A program whereby students obtain both the MD degree and PhD degree to prepare them for a career as a clinician-scientist.

See §114 for details of programs of study.

#### **Dental Programs**

- 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 posses 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 requirement is successful completion of an approved accredited Canadian or international dental hygiene diploma program.
- (7) MSc and PhD degrees in Medical Sciences (Dentistry).
- (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, 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 lectures, 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.

See §114 for details of programs of study.

#### **Department of Dentistry Objectives** 112.1

- (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
  - attracting, selecting, and motivating the most qualified academic and non-academic staff: and
  - creating a university environment that emphasizes the quality of life for
- (2) 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
  - a. other health sciences and other disciplines of the University to promote comprehensive health care:
  - the dental profession, dental auxiliaries, auxiliary-training programs, and the community to promote oral health; and
  - basic and clinical science organizations and granting agencies to promote disciplinary and interdisciplinary research.
- (3) 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;
  - 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;
  - incorporate recent concepts, materials, techniques, advances, and research in all areas; and reflect the existing and projected provincial, national, and international oral health needs;
  - 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
  - graduate students who are competent to assume roles of leadership and service in their professions and communities.
- (4) To provide the opportunity and stimulus for continued learning through postgraduate, graduate, research, and continuing education programs.
- 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 underserviced rural and urban communities.

#### **Affiliated Hospitals and Institutions** 112.2

#### **Affiliated Hospitals** 112.2.1

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 Dentistry Pharmacy Centre 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.

#### 112.2.2 Family Medicine Rural Teaching Sites

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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.

#### 112.2.4 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.

#### 112.2.5 University of Alberta Surgical-Medical Research

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

#### 112.2.6 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 and Wellness.

#### 112.2.7 **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.

#### **Registration and Licensing** 112.3

#### **DDS Degree** 112.3.1

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.

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 licencing 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.

## 112.3.2 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 licencing body. Contact information is available from the Canadian Dental Hygienists Association (www.cdha.ca).

#### 112.3.3 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 Alberta Dental Hygienists Association may refuse to issue a license and/or registration certificate to practise dental hygiene to any applicant with a criminal record.

#### 112.4 Finance

#### 112.4.1 DDS Degree

Tuition fees for the program can be found in §22.2. No student is allowed to purchase a kit without permission of the Department of Dentistry.

**Note:** The figures are based on 2011–2012; figures are subject to change without notice.

Additional Costs for DDS Students	Year 1	Year 2
Books	1,000	1,000
Dental Kits	4,000	6,000
Dental Students Association	80	80
	Year 3	Year 4
Books	1,000	1,000
Dental Kits	2,000	2,000
Dental Students Association	80	80
National Dental Examining Board (refer to	N/A	

### 112.4.2 Dental Hygiene Diploma

Tuition fees for the program can be found in §22.2.

Note: The figures are based on 2011–2012; figures are subject to change without notice.

Additional Costs for DH Students	Year 2	Year 3
Books	600	600
Dental Hygiene Kits	4,000	2,500
Membership Fees	80	80
Professional Exam Fee (refer to www.ndhcb.ca)	N/A	525

**Uniforms:** The student is expected to have a lab coat, uniform, white clinic shoes and safety glasses. The lab coat, uniform, shoes, and safety glasses are purchased under the direction of the program.

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

## 112.4.3 Bachelor of Science (Dental Hygiene Specialization)

Tuition fees for the program can be found in §22.2.

Note: The figures are based on 2011–2012; figures are subject to change without notice.

Additional Costs for Students	Year 4
Books	900
Dental Hygiene Kits	N/A
Membership Fees	80

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

(See §112.4.3)

#### 112.4.5 Advanced Placement Program (DDS)

Tuition fees for the program can be found in §22.2.

**Note:** The figures are based on 2011–2012; figures are subject to change without notice.

Additional Costs for Students	Year 1	Year 2
Books (optional)	1,000	400
Dental Kits	11,000	1,000
Membership Fees	80	170
National Dental Examining Board (refer	to www.ndeb.ca)	N/A

#### 112.4.6 MD Degree

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Information on fees charged to students in the MD and MSc programs is given in §22. 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.

## 112.5 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 Dentistry-Pharmacy Hockey Challenge, 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.

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### 113 Admission and Academic Regulations

#### 113.1 Admission

See §§13 and 14 for general admission requirements to the University. See §15 for specific admission information for the DDS, Dental Hygiene, MD, and BSc in Medical Laboratory Science programs.

#### Combined Program for the Degrees of 113.1.1 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.

#### Academic Standing and Graduation 113.2

#### 113.2.1 **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 §114.2).

- (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 §23.8.2, 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
- (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.

#### Reexaminations

- Students are allowed reexamination privileges only in courses that are
- The Department of Dentistry Academic Standing Committee and the Faculty Academic Standing and Promotion Committee must approve reexaminations for students who fail two or fewer courses. Students

- with more than two (2) failed courses in any academic year will not be allowed reexamination privileges.
- The Department of Dentistry Academic Standing Committee and the Faculty Academic Standing and Promotion Committee may allow reexamination of a 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.
- 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.
- 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
- The Faculty of Medicine and Dentistry Academic Standing and Promotion Committee will specify by course the remediation/ reexaminations required of a failed student for the purposes of meeting promotion/graduation requirements.
- 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
- h. The reexamination mark (as in the case of a deferred mark) will replace the original final exam mark.
- Reexaminations in all years of the DDS program must be approved first by the Department of Dentistry Academic Standing Committee and then by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee.
- Over the program, reexamination privileges will not exceed five reexaminations. In DDS 509, 529, 545, 565 all components must be successfully completed and each reexamination in a component of these courses will compose one of the five reexamination privileges.
- (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.
  - 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.
  - A student who fails more than two courses in any year of the program will be required to withdraw from the program.
- (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.
  - 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
    - 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
  - 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
    - 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.

For students in any Department of Dentistry undergraduate clinical program, including Dentistry, Dental Hygiene and Advanced Placement, where there is a greater potential for transmission of bloodborne pathogens between students and patients as a result of activities involved in their clinical experience in practice settings, the following procedures will apply:

Hepatitis B: Current information indicates that there is a potential risk of transmission of Hepatitis B from practitioner to patients in the clinical dental setting. Therefore, applicants will be required to be tested for Hepatitis B surface antigen by the University Health Centre or other appropriate medical facility. Applicants who test positive for Hepatitis B surface antigen will be tested for Hepatitis B "e" antigen and Hepatitis B viral DNA to help determine infectivity risk. If either Hepatitis B "e" or Hepatitis B viral DNA is positive the offer of acceptance will be withdrawn and registration in any Department of Dentistry undergraduate clinical program will not be completed.

For those applicants who test negative to Hepatitis B surface antigen and are registered in any Department of Dentistry undergraduate clinical program, 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.

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

#### 113.2.2 DDS Advanced Placement Program

The program leading to the DDS Advanced Placement is conducted in a minimum of two years (see §114.3, 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.
- (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 §23.8.2, 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

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- 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 two or fewer courses. Students with more than two (2) failed courses in any academic year will not be allowed reexamination privileges.
- c. The Department of Dentistry Academic Standing Committee and the Faculty Academic Standing and Promotion Committee may allow reexamination of a 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. 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.
- 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.
- f. The Faculty of Medicine and Dentistry Academic Standing and Promotion Committee will specify by course the remediation/ reexaminations required of a failed student for the purposes of meeting promotion/graduation requirements.
- g. 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.
- Reexaminations in both years of the Program must be approved first by the Department of Dentistry Academic Standing Committee and then by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee.
- (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 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
- (8) 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.
- (9) Voluntary Withdrawal: A student in the DDS Advanced Placement Program who chooses to withdraw, forfeits the position and will not be readmitted.
- (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 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.).
- (12) Medical Testing and Immunization Requirements: See §113.2.1(12).
- (13) Certification in CPR (Cardiopulmonary Resuscitation) at the Basic Rescuer Level is required.

#### 113.2.3 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.

- (1) Certification in CPR (Cardiopulmonary Resuscitation) at the Basic Rescuer Level is required.
- (2) 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 §23.8.2, Practicum Intervention Policy.)
- (4) 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.
- (6) 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.

#### (7) Reexaminations: See §23.5.5.

- a. Students are allowed reexamination privileges only in courses that are
- 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.
- 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.
- A student repeating a year is not allowed reexamination privileges in that year of the program.
- 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.
- 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.
- 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).
- The reexamination mark (as in the case of a deferred mark) will replace the original final exam mark.
- Any student who, after reexamination and/or evaluation fails to meet promotion/graduation requirements, is deemed to have failed the year.
- 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.
- 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

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- 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
- First- and second-year Dental Hygiene students will take the reexamination as scheduled by June 30. Students in the third year will write after the end of the first term for first term courses, and by June 30 for second term and two term courses. Students in the fourth year will write reexaminations after Spring/Summer for Spring/Summer courses or at the end of first term for first 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 first-year and second-year Dental Hygiene only in exceptional cases as determined by the Department Council. 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;
  - has clinical/practicum deficiencies in no more than two clinical courses and is advised that the deficiency could be corrected within a fourmonth period of instruction; and
  - 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:
  - 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:
    - Students who have met normal promotion requirements.
    - Faculty approved repeating students and students returning after voluntary withdrawal, in order of academic standing.
  - 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 §113.2.1(12).

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#### 113.2.4 MD Program

The program leading to the MD degree is conducted in four Years (1, 2, 3 and 4), Years 1 and 2 are under the direction of a preclinical coordinating committee and Years 3 and 4 under the direction of a clinical coordinating committee. (See §114.5.)

- 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 §23.8.2, 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 all courses.
- (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
  - Students must pass the comprehensive examination before being promoted or allowed to graduate.
- (6) Students are not ranked or assigned a numeric grade, but are designated as having passed (received credit) or failed a course.

#### (7) Reexaminations

- Students are allowed reexamination privileges only in courses that are failed
- A student repeating a year is not allowed reexamination privileges in that year.
- c. 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.
- d. If a reexamination is approved, satisfactory completion of a remedial program may be required before the student is permitted to take the reexamination.
- 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.
- f. The reexamination mark will replace the original final exam mark (as in the case of a deferred mark).
- g. Reexamination privileges will be granted to students failing only one course in any year of the program.
- Reexamination of MED 540 Comprehensive Examination: Students who fail the comprehensive examination will be granted a reexamination.
- (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.

- 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, excluding MED 540 (comprehensive exam) will not be allowed to write the comprehensive exam and will be required to withdraw.
- Students who fail more than one course in a Year of the program will be required to withdraw from the program.
- (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.
  - A student repeating a year is not allowed reexamination privileges in that year of the program.
  - 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 of Undergraduate Medical Education, 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:
  - 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:
    - students who have met normal promotion requirements.
    - 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.
- (11) 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.
- (12) 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.)

#### (13) 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, diptheria, tetanus, 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 (§23.8.2 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.

### 113.2.5 BSc Program in Medical Laboratory Science

 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 four 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.

- (2) The quota for Phase I students is 26.
- (3) 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.
- (4) Reexamination: See §23.5.5
- (5) 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.
- (6) Any student whose technical work or academic performance is deemed unsatisfactory may be required to withdraw from the Faculty.
- (7) For students in Medical Laboratory Science, 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 antigen testing will be performed by the University Health Centre on all students after acceptance into 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.

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.

### 113.3 Appeals and Grievances

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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 §23.8.

Students who have a grievance about a grade in an individual course taught in this Faculty should consult §23.8, 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.

## 113.4 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 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. Additionally, the Faculty of Medicine and Dentistry has filed with the Campus Law Review Committee a list of offences representing gross professional misconduct.

## 114 Programs of Study

### 114.1 Protection of Persons in Care

Students should be aware that under the Alberta Protection of People in Care Act, they can be required to satisfy a criminal records check before being allowed to serve a period of internship/practicum placement/work experience placement. Refer to §23.8.3.

## 114.2 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 §205 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	★3	5 weeks	
DMED 512	<b>★</b> 6	7 weeks	
DMED 513	<b>★</b> 6	6 weeks	
DMED 514	<b>★</b> 11	14 weeks	
DDS 509	<b>★</b> 12	9 weeks	
DDS 510	<b>★</b> 6	2-6s-0/week	
DDS 514	<b>★</b> 2	0-0-60	
DDS 518	★4	54-0-6	
INT D 410	<b>★</b> 3	0-32.5-0	
Year 2			
DDS 506	<b>★</b> 5	6 weeks	
DDS 507	<b>★</b> 9	11 weeks	
DDS 508	<b>★</b> 2	2 weeks	
DDS 520	<b>★</b> 6	2-6s-0/week	
DDS 523	<b>★</b> 6	7 weeks	
DDS 529	<b>★</b> 25	19 weeks	
DDS 532	★4	60-0-0	
DDS 533	<b>★</b> 2	30-0-0	
Year 3			
DDS 541	<b>★</b> 1	15-0-0	
DDS 545	<b>★</b> 52	39 weeks	
DDS 547	★1	15-0-0	
DDS 549	<b>★</b> 3	25-0-45	
DDS 555	★1	15-0-0	
Year 4			
DDS 565	<b>★</b> 50	30 weeks	

## 114.3 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 successful entry 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 successfully complete the preclinical assessment course DDS 829. This course will assess the students' ability to perform clinical procedures for the treatment of patients. Successful completion of this course will permit students to enter the first year of the Advanced Placement Program and then be assigned patients to treat 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	<b>★</b> 1	15-0-0	
DDS 545	★52	39 weeks	
DDS 547	<b>★</b> 1	15-0-0	
DDS 549	★3	25-0-45	
DDS 555	<b>★</b> 1	15-0-0	
Year 2			
DD6 E6E	<b>±</b> E0	20 wooks	

# 114.4 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

Also required is a  $\bigstar 3$  course in interdisciplinary studies approved by the Department and normally scheduled in the evening.

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.

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#### **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

BIOCH 200	<b>★</b> 3	39-0-0	
D HYG 203	★4	52-0-2	
D HYG 210	<b>★</b> 3	39-0-0	
D HYG 211	<b>★</b> 6	78-0-0	
D HYG 212	<b>★</b> 6	0-0-180	
D HYG 213	<b>★</b> 3	0-99c-3	
D HYG 220	<b>★</b> 3	26-0-26	
D HYG 230	<b>★</b> 1	15-0-0	
D HYG 240	<b>★</b> 2	28-0-15	
INT D 410	<b>★</b> 3	0-32.5s-0	
MMI 133	<b>★</b> 3	39-0-0	
OBIOL 202	★4	60-0-2	
PHYSL 210	<b>★</b> 6	78-0-0	
Year 3			
D HYG 313	★8	0-471c-0	
D HYG 313 D HYG 314	<b>★</b> 8 <b>★</b> 8	0-471c-0	
		0-471c-0 39-0-0	
D HYG 314	★8		
D HYG 314 D HYG 316	<b>★</b> 8 <b>★</b> 3	39-0-0	
D HYG 314 D HYG 316 D HYG 317 D HYG 321 D HYG 322	★8 ★3 ★3	39-0-0 39-0-0	
D HYG 314 D HYG 316 D HYG 317 D HYG 321	★8 ★3 ★3 ★2	39-0-0 39-0-0 13-0-39	
D HYG 314 D HYG 316 D HYG 317 D HYG 321 D HYG 322	*8 *3 *3 *2 *3	39-0-0 39-0-0 13-0-39 39-0-0	
D HYG 314 D HYG 316 D HYG 317 D HYG 321 D HYG 322 D HYG 326	★8 ★3 ★3 ★2 ★3 ★2.5	39-0-0 39-0-0 13-0-39 39-0-0 35-3s-0	
D HYG 314 D HYG 316 D HYG 317 D HYG 321 D HYG 322 D HYG 326 D HYG 329 D HYG 340 D HYG 386	*8 *3 *2 *3 *2.5 *2.5 *1 *2.5	39-0-0 39-0-0 13-0-39 39-0-0 35-3s-0 0-75c-0 0-24c-0 15-0-45	
D HYG 314 D HYG 316 D HYG 317 D HYG 321 D HYG 322 D HYG 326 D HYG 329 D HYG 340 D HYG 386 OBIOL 302	*8 *3 *2 *3 *2.5 *2.5	39-0-0 39-0-0 13-0-39 39-0-0 35-3s-0 0-75c-0 0-24c-0	
D HYG 314 D HYG 316 D HYG 317 D HYG 321 D HYG 322 D HYG 326 D HYG 329 D HYG 340 D HYG 386 OBIOL 302 OBIOL 305	*8 *3 *2 *3 *2.5 *2.5 *1 *2.5	39-0-0 39-0-0 13-0-39 39-0-0 35-3s-0 0-75c-0 0-24c-0 15-0-45	
D HYG 314 D HYG 316 D HYG 317 D HYG 321 D HYG 322 D HYG 326 D HYG 329 D HYG 340 D HYG 386 OBIOL 302	*8 *3 *2 *3 *2.5 *2.5 *1 *2.5 *3	39-0-0 39-0-0 13-0-39 39-0-0 35-3s-0 0-75c-0 0-24c-0 15-0-45 45-0-0	

#### **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

ANTHR 393 or SOC 382	<b>★</b> 3	39-0-0
D HYG 413	<b>★</b> 3	0-90s-0
D HYG 414	<b>★</b> 3	36-0-6
D HYG 417	<b>★</b> 3	39-0-0
D HYG 418	<b>★</b> 3	39-0-0
D HYG 422	<b>★</b> 3	39-0-0
D HYG 440	<b>★</b> 3	39-0-0
D HYG 468	<b>★</b> 3	39-0-0
Two Options	<b>★</b> 6	78-0-0

(a minimum of one at the 300- or 400-level with the approval of Program Director) A maximum of  $\star$ 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:

<b>★</b> 3	39-0-0
<b>★</b> 3	39-0-0
<b>★</b> 3	39-0-0
<b>★</b> 3	39-0-0
<b>★</b> 6	78-0-0
	★3 ★3 ★3 ★3

(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:

ANTHR 393 or SOC 382	<b>★</b> 3	39-0-0	
D HYG 417	<b>★</b> 3	39-0-0	
D HYG 418	<b>★</b> 3	39-0-0	
D HYG 422	<b>★</b> 3	39-0-0	
D HYG 440	<b>★</b> 3	39-0-0	
D HYG 468	<b>★</b> 3	39-0-0	
(or equivalent health research course)			
Four options	<b>★</b> 12	156-0-0	

(with the approval of the Program Director, two at the 300- or 400-level) A maximum of  $\bigstar 3$  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:

ANTHR 393 or SOC 3	382 ★3	39-0-0
D HYG 417	<b>★</b> 3	39-0-0
D HYG 418	★3	39-0-0
D HYG 422	<b>★</b> 3	39-0-0
D HYG 440	<b>★</b> 3	39-0-0
D HYG 468	★3	39-0-0
(or equivalent health	research course)	
SOC 210	★3	39-0-0
(or equivalent statistic	es course)	
Three options	★9	117-0-0

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

## 114.5 MD Degree

#### **General Information**

The program leading to the MD degree is conducted over four years. The curriculum is planned and administered by interdepartmental committees representing a broad range of basic science and clinical disciplines.

Years 1 and 2 are the preclinical years in which the material is presented in a series of system-based course blocks. Each block presents the material in a reasoned progression from basic information to clinical application. There are two separate, but 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 clinical years, commonly called the clinical clerkship. During the clerkship, each student must maintain a record of the number and variety of his or her 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 clinical 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

- (1) DMED 511 (5 weeks)
- (2) DMED 512 (7 weeks)
- (3) DMED 513 (6 weeks)
- (4) DMED 514 (14 weeks)
- (5) MED 515 (17 weeks)
- (6) MED 516 (8 hours/week)
- MED 517 (12 hours) (7)
- MED 519 (4 hours/week)
- (9) INT D 410 (0-32.5-0)

#### Year 2

- (1) MED 521 (6 weeks)
- (2) MED 524 (11 weeks)
- (3) MED 525 (4 weeks)
- (4) MED 522 (7 weeks)
- (5) MED 523 (7 weeks)
- (6) MED 526 (4 hours/week)
- (7) MED 527 (12 hours)
- (8) MED 529 (4 hours/week)
- (9) MED 520 (9 hours)
- (10) MED 518 (variable)

#### Year 3

- (1) MED 532 (2 weeks)
- (2) MED 530 (9 hours)
- (3) F MED 546 (8 weeks)
- MED 546 (8 weeks) (4)
- (5) MED 547 (3 weeks)
- (6) OB GY 546 (6 weeks)
- (7) PAED 546 (8 weeks)
- (8) PSYCI 546 (6 weeks)
- (9) SURG 546 (7 weeks)
- (10) MED 531 (36 hours) (11) MED 543 (36 weeks)

## Year 4

- (1) MED 555 (3 weeks)
- (2) MED 557 (10 weeks)
- (3) MED 558 (3 weeks)
- (4) MED 556 (3 weeks)
- (5) SURG 556 (6 weeks)
- (6) MED 542 (3 weeks)
- (7) MED 541 (36 hours)
- (8) MED 540 (9 hours)

#### MD with Special Training in Research 114.6

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, 2J2.11 Walter C Mackenzie Health Sciences Centre.

#### Degree of BSc in Medical Laboratory 114.7 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

#### **Program of Courses**

#### Phase I

- (1) MLSCI 200 (★3)
- (2) MLSCI 230 (★3)
- (3) MLSCI 235 (★1)
- (4) MLSCI 242 (★3)
- (5) MLSCI 243 (★3)
- (6) MLSCI 250 (★3)
- (7) MLSCI 262 (★3)
- (8) MLSCI 263 (★3)
- (9) MLSCI 270 (★2)
- (10) PHYSL (★6)
- (11) Arts Option (★3)

#### Phase II - Clinical Rotation (See Note 1)

- (1) BIOCH 200 (★3)
- (2) BIOCH 330 (★3)
- MLSCI 320 (\*3)
- (4) MLSCI 330 (★5)
- (5) MLSCI 340 (★5)
- (6) MLSCI 350 (★3)
- (7) MLSCI 360 (★5) (8) MLSCI 370 (★3)

#### Phase III (See Note 2)

- ★12 chosen from MLSCI 430, MMI 445, MLSCI 460, 466, 475, 481, MMI 426 or 427 or 405 or 415
- MLSCI 480 (\*3)
- (3) MLSCI 410 (★1)
- (4) Project course: INT D 491 (★6) or 409 (★3) and Science option (★3)
- (5) INT D 410 (★3)
- (6) Arts option (★3)
- (7) Approved option (★3)

- (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
- (2)  $\bigstar 3$  in a Science option are required if a  $\bigstar 3$  project is attempted.  $\bigstar 0$  in a science option are required if a  $\star 6$  project is attempted.

## 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 ★76 additional study post-diploma and ★60 must be completed through the University of Alberta.

#### Program of Courses

#### Year 1

- (1) BIOL 107 (\*\*3)
- (2) CHEM 101 (★3)
- (3) CHEM 102 (★3)
- (5) CHEM 263 (★3)

(4) CHEM 164 or 261 (★3)

- (6) MLSCI 244 (\*3)
- (7) MLSCI 245 (★3)
- (8) MLSCI 320 (★3)
- (9) STAT 141 or 151 or 337 (★3)
- (10) Approved MLS options (★6)

#### Spring/Summer

- (1) BIOCH 200 (★3)
- (2) BIOCH 330 (★3)
- (3) Arts options (★6)

#### Year 2

- (1) MLSCI 410 (★1)
- (2) MLSCI 480 (★3)
- Project course INT D 491 (★6) or INT D 409 (★3) and Science option (★3)
- ★12 chosen from MLSCI 430, MMI 445, MLSCI 460, 466, 475, 481, MMI 405 or 426 or 427 or 415
- INT D 410 (★3)
- (6) Arts option (★3)
- (7) Approved option (★3)

## **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, 151, 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 Clinical Health Academy.

## 114.10 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:

#### **First and Second Year**

Prerequisite courses required for entrance to the DDS or MD program.

#### **Third and Fourth Year**

Preclinical (Years 1 and 2) of the DDS or MD program.

- (1) None of the courses in the first and second year has been used for credit toward another degree.
- (2) At least the final two years have been taken at the University of Alberta.
- (3) All courses have been successfully completed.

## 114.11 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.

## 114.12 Continuous Professional Learning

Continuous Professional Learning provides practicing physicians with the opportunity to remain up-to-date in knowledge, skills and attitudes. The Division has made a shift from weekend conferences to longitudinal programs. The division currently offers the Video-conference program and Regional programs for rural physicians and 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://albertaplp.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 (www.cpl.ualberta.ca).

## 114.13 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

## 114.14 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:

#### 114.14.1 Primary Certification Programs

Anaesthesiology and Pain Medicine

Anatomical Pathology

Cardiac Surgery

Community Medicine

Dermatology

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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

#### 114.14.2 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

Respirology (Adult and Paediatric) Rheumatology

#### 114.14.3 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 Ledcor 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:

- (1) An MD degree.
- (2) 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.
- (3) 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.

## 114.15 Postgraduate Dental Education

## 114.15.1 Specialty Enhancement for General Dentistry Education

The Specialty Enhancement for General Dentistry Education is designed to enhance the diagnostic, treatment planning and clinical skills of general dentists in key specialty disciplines so that they can successfully deliver a broader range of oral healthcare services in rural areas where specialist services are not available.

This general residency program is one calendar year in length, July 1 through June 30. Three DDS graduates are accepted each year, those accepted primarily being DDS graduates in the year in which they begin the residency.

Under the direction of dental specialists and general practitioners, residents will provide care to patients who cannot be seen by undergraduate dental students because of the complexity and/or scope of the required Treatment. 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. Residents will also be involved in the University of Alberta Hospital Dental Service, providing clinical treatment to patients during scheduled daytime clinics, evening and weekend emergency walk-in clinics, and on-call.

An important additional component of this residency program is off site rotations to under served areas of this province.

#### 114.15.2 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 healthcare 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 healthcare rotations by each resident to an underserved area of this province.

## 114.16 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.

## 115 Courses

Faculty of Medicine and Dentistry courses are listed in §231, 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 (OBIOL)

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)