# **Faculty of Medicine and Dentistry**

110	The Faculty of Medicine and Dentistry 238
111	The Professors 239
111.1	Teaching and Scholarship 239
112	General Information 246
112.1	Department of Dentistry Objectives 247
112.2	Affiliated Hospitals and Institutions 247
112.3	Registration and Licensing 247
112.4	Finance 248
112.5	Medical and Dental Society Memberships 248
113	Admission and Academic Regulations 249
113.1	Admission 249
113.2	Academic Standing and Graduation 249
113.3	Appeals and Grievances 254
113.4	Professional Standards for Students in the Faculty of Medicine and Dentistry 254
114	Programs of Study 254
114.1	Protection of Persons in Care 254
114.2	DDS Degree 254
114.3	DDS Advanced Placement Program 254
114.4	
114.4	Dental Hygiene Diploma/Bachelor of Science (Dental Hygiene Specialization) 255
114.5	Specialization) 255 MD Degree 256
114.5 114.6	Specialization) 255 MD Degree 256 MD with Special Training in Research 256
114.5 114.6 114.7	Specialization) 255 MD Degree 256 MD with Special Training in Research 256
114.5 114.6 114.7 114.8	Specialization) 255 MD Degree 256 MD with Special Training in Research 256 Degree of BSc in Medical Laboratory Science 256 Post-Professional Certificate BSc in Medical Laboratory Science 257
114.5 114.6 114.7 114.8 114.9	Specialization) 255 MD Degree 256 MD with Special Training in Research 256 Degree of BSc in Medical Laboratory Science 256 Post-Professional Certificate BSc in Medical Laboratory Science 257
114.5 114.6 114.7 114.8 114.9 114.10	Specialization) 255 MD Degree 256 MD with Special Training in Research 256 Degree of BSc in Medical Laboratory Science 256 Post-Professional Certificate BSc in Medical Laboratory Science 257 Honors in Research Program in Medical Laboratory Science 257
114.5 114.6 114.7 114.8 114.9 114.10 114.11	Specialization) 255 MD Degree 256 MD with Special Training in Research 256 Degree of BSc in Medical Laboratory Science 256 Post-Professional Certificate BSc in Medical Laboratory Science 257 Honors in Research Program in Medical Laboratory Science 257 Degree of Bachelor of Medical Science 257
114.5 114.6 114.7 114.8 114.9 114.10 114.11 114.12	Specialization) 255 MD Degree 256 MD with Special Training in Research 256 Degree of BSc in Medical Laboratory Science 256 Post-Professional Certificate BSc in Medical Laboratory Science 257 Honors in Research Program in Medical Laboratory Science 257 Degree of Bachelor of Medical Science 257 Graduate Studies 257
114.5 114.6 114.7 114.8 114.9 114.10 114.10 114.11 114.12 114.13 114.14	Specialization) 255 MD Degree 256 MD with Special Training in Research 256 Degree of BSc in Medical Laboratory Science 256 Post-Professional Certificate BSc in Medical Laboratory Science 257 Honors in Research Program in Medical Laboratory Science 257 Degree of Bachelor of Medical Science 257 Graduate Studies 257 Continuous Professional Learning 257 Continuing Dentistry Education 258
114.5 114.6 114.7 114.8 114.9 114.10 114.11 114.12 114.13	Specialization) 255 MD Degree 256 MD with Special Training in Research 256 Degree of BSc in Medical Laboratory Science 256 Post-Professional Certificate BSc in Medical Laboratory Science 257 Honors in Research Program in Medical Laboratory Science 257 Degree of Bachelor of Medical Science 257 Graduate Studies 257 Continuous Professional Learning 257 Continuing Dentistry Education 258

# 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 the Capital Health Authority, the Alberta Cancer Board and other partners.

# 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 the Capital Health Authority, 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 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 Divisions	11
Number of Academic Staff	1,145

#### www.ualberta.ca

### UNIVERSITY OF ALBERTA

Number of Faculty	561
Number of Faculty Service Officers	11
Number of Administrative Professional Officers	16
Number of other	557
Number of Clinical Staff	1,290
Number of Support Staff	1,149
Numbers of Students and Residents	
Medical Students	527
Medical Residents	712
Dental Students	138
Dental Residents	6
Dental Hygiene Students	112
Medical Laboratory Science Students	45
Graduate Students:	585

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**

# 111.1 Teaching and Scholarship

The Faculty of Medicine and Dentistry offers a number of outstanding educational programs including the Medical Degree, the Doctor of Dental Surgery, Dental Hygiene 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 \$148 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

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

### Office of the Dean

Dean TI Marrie Vice-Dean J Ginsberg Executive Director V Wulff Associate Deans D Rayner C de Gara G Elleker T Feashy J Jhamandas J Konkin Assistant Deans M Moreau M Sagle G Taylor V Yiu Director, Equity & Assistant Professor L Breault **Faculty Service Officer** D James Administrative Officer C Iwanicka

# Faculty Departments

Anesthesiology and Pain Medicine

Chair and Professor BA Finegan Professors \*AS Clanachan BT Finucane

Associate Professors RA Kearney S Rashiq B Tsui Assistant Professor

S Gupta

Clinical Professors DJ Cubitt R Gregg R Hudson Associate Clinical Professors RG Bergstrom R Brown M Buss MXM Coughlan DB DuVal LM Entwistle DP Gray C Ecuother

DP Gray CR Guenther LR Hatch LJ Huston RG Johnston B Knight JT Lilley BE Marchak WJ Murtha S Paterson GA Perez RF Seal TW Yeh Assistant Clinical Professors J Belzil J Bluzyk

D Cave

PG Cisar MR Cohen Y Csanyi-Fritz **BP** Delbecq A Dovle JM Dupuis S Eeson KA Faccenda V Ford D Gamez M Gregoret-Quinn AS Guest DA Hardy R Haugen LY Huano MS Jacka V lensen DT Jolly R Kelly JP Kolle **B** Kropelin M Kruger P Kulkarni **ER** Lazar J Lujic IA MacDonald P Matthey DA Mercereau JA Moir D Muzyka S Nathan ( I Noble A Nunes SA Olson P Paetsch **BZ** Petriw S Rabuka **B** Ramsev SI Reid H Reine ZS Saleh H Sandhu L Scheeler S Scott M Simmonds C Tang BP Unae DH Wiebe Clinical Lecturers M Auld L Baron MH Bercovich C Cave JR Charlton A Fitzmaurice I Hamilton-Klinck IC Hrazdi B MacNico E Man L McGowan L Nadeau L Nadwidny 01 Schneider I Wachowski Biochemistry Chair and Professor M Michalak

Professors RC Bleackley DN Brindley \*CE Cass MJ Ellison L Fliegel JNM Glover CFB Holmes MNG James **RN McElhanev** MC Schultz P Scott JC Stone **BD** Sykes \*DLJ Tyrrell DE Vance JH Weiner Associate Professors LB Agellon \*J Casey \*G Francis \*R Godbout A MacMillan L Schang D Stuart Assistant Professors **R** Fahlmar IS Goping \*B Hazes C Fernandez-Patron L Spyracopoulos K Wilson H Young Professors Emeriti WA Bridger JS Colter **RS Hodaes** CM Kay NB Madsen VH Paetkau LB Smillie

**BD** Lemire

Faculty Service Officers R Milner A Wright

Administrative Officer GM Redmond

#### Biomedical Engineering Chair and Professor

RE Burrell

Professors \*KM Bagnall \*KG Pearson \*A Prochazka \*RV Rajotte \*JF Wolfaardt

Associate Professors C Beaulieu AH Wilman \*THA EI-Bialy

Assistant Professors \*DJ Emery MA Gorassini D Gross KE Jones \*JR Lakey \*LLe VK Mushahwar \*B Stein RB Thompson Professors Emeriti PS Allen

DJ Griffiths TR Overton RE Snyder Adjunct Professors A Amirfazli

D Fenna

D Bennet

240

#### CJ Backhouse J Chen MR Doschak MG Faulkner F Fenrich G Kawchuk ZJ Koles D Li M Olson NG Shrive

H Uludao

### **Cell Biology**

**Chair and Professor** RA Rachubinski

Professors **RB** Campenot \*WJ Gallin T Hobman TL Krukoff P Melancon \*D Pilgrim R Wozniał

#### **Associate Professors** L Berthiaume

\*R Lehner M Pasdar Z Wang

#### Assistant Professors G Eitzen

\*E Foley

T Simmen

#### A Simmonds Professor Emeritus

**RS Smith** 

Administrative Officer **KM** James

# Dentistry

**Medicine and Dentistry** Acting Chair and Professor **DN Dederich** Professors FM Eagert HE EL Badrawy LW Kline PW Major WT McGaw NC Milos E Peters JFL Pimlott KM Polukoshko PD Schuller DA Scott PG Scott L Strain

### **Associate Professors**

S Compton E Edgington T El-Bialy H Nainar U Nassar DI Pehowich HK Tan Assistant Professors

#### C Cable S Cobban

G Heo **Clinical Professors** B Gitzel EA Krause E McIntyre SK Patterson **D** Pettigrew W Preshing C Revell I Ritchie JA Scott EW Tunis KW Wong CC Yu DC Yu

**Clinical Associate Professors** M Armstrong **BS Bennett** C Biggs C Blackman J Borrelli N Chalk LC Chan R Cox R Croutze R Easton CK Fialka-Eshenko C Flores-Mir P Gainer S Ganatra D Gotaas M Howell I Kuc EWL Kwan RLahahn M Lalh S Lalh VP Lee T Lee-Knight W Leung JLockau K Lung C MacDonald DJ MacDougall LR Moore **BR** Neumann M Parfitt PL Pierce W Primrose P Schulte E Steinbring TR Stevenson W Swanson MT Taciuk N Thie J Valentine WG Wesner P Williamson P Yeung G Zenith **Clinical Assistant Professors** K Bapoo-Mohamed DH Bédard L Best D Boychuk AH Brouwer T Carlyle J Cornish W Dhol J Doberstein W Dobrovolsky D Eliuk J Eliuk A Fiorillo K Habib A Hoh E Jang M Kaiser L Kamelchuk D Kelner **R** Kreutz B Kula M Kun J Leakey S Lockwood D Lunardon W MacKinnon M Miller N Palmer M Pokroy **R** Schafers A Sheppard S Switzer U Szkudlarek I Thomas T Vankka GP Wendell D Wong P Wooding J Yacyshyn

#### C Yue HC Yu Clinical Instructors S Ash S Bakker M Barnett M Bennett K Bieniak M Bochinski N Bornau R Brisbane D Burnett R Caldwell A Chan C Chiu C Chomay A Chomik D Correia J Czarnobaj J Dalmer T Dawson A Dekterov W Dewar H Dhaliwal E Diduch D Dietz D Doderai G Edwards **K** Farrell C Fletcher J Haraphongse C Heath I Hernandez B Hoyano C Huber L Hursin J Jacob P Kimos M Knoefel R Krim R Kulshrestha E Law SLee Klim K Llovd D Lobb I Mah V Mak T Massini P McIntyre-Schemerhorn I McKee J McLean D Meador D Neale J Ng J Nijjer R Nijjer **B** Nordstrom I Picard **R** Pratt M Radmanovich **R** Reiter D Ricioppo **R** Ridley A Senior C Sheremata M Sihota K Sperling K Steyn M Susoeff **B** Ulmer J White M Wilson I Wittchen J Wood P Wu D Yeung T Zukiwsky **Professors Emeriti BK Arora RV Blackmore** DM Collinson HM Dick AD Fee **KE Glove**

WT Harley PD MacRae RC McClelland WC Mever CI Osadetz JW Osborn DM Paton CH Pearson JM Plecash GW Raborn AJ Simons **GH** Sperber NR Thomas GW Thompson NK Wood **Emergency Medicine Chair and Professor BR Holrovd** Professors M Bullard B Rowe \*IP Steiner **Associate Professors GE** Cummings \*L Francescutti \*PW Yoon Assistant Professor \*D Nichols **Clinical Professor** TD Sosnowski Associate Clinical Professors MA Cherniwchan \*D Mackey W Patton DL Shragge Assistant Clinical Professors D Bond HA Borkent MJ Boulange JJ Brown **R** Cunningham S Dong CGM Evans J Franc-Law T Graham R Hansen P Jain **R** Kruhlak R Lee M Long M Mrochuk AR Murray SA Poplawski DC Perry RA Purse C Rabuka M Rico L Sim W Sevcik S Sookram AF Walker Adjunct Associate Clinical Professor I Vicas **Clinical Lecturers** BL Abel D Ariano N Barclay D Barer J Bitangcol RG Brown E Chang S Chow K Cromwell TM Curry R Daloise **B** Deane P Delaney **B** Diner K Dong **B**Edgecumbe

UNIVERSITY OF ALBERTA

S Flanagan K Foster D Ha K Harris D Hoshizaki D Hrvciuk RJ Ibach S Jones K Lam A Lund G Luna R MacDonald C MacGougan M MacKenzie S MacLachlan K Mangan J McKague K McLelland I Mohler W Molberg M Moss DW Neilsen K Neilson R Oland P Parks CL Peterson K Peterson F Rabin D Reid S Ross A Rothney D San Agustin G Scheirer **R** Scheirer L Sharma L Shenfield (Hillier) R Sherman F Soibelman A Stagg TF Stetsko DF Stewart W Thirsk AW Ushko F Voon D Watrich C Westover R Yao A Yeung AK Yeuna M Young Adjunct Assistant Professors \*L Evered \*K Kelly J Sullivan I Tchir B Windwick **Family Medicine Chair and Professor GR** Spooner Professors NR Bell A Cave **RG** Chaytors MG Donoff \*NI Gibson \*B Holrovd P Humphries \*P Jacobs \*N Keating DG Moores l Steiner J Triscott **Associate Professors** FR Brenneis R Brownoff \*GE Cumminas BM Dobbs \*S Esmail \*RL Fainsinge S Hughes J Konkin EH Krikke D Ross

P Yoon

www.ualberta.ca

Assistant Professors GM Allan M Cave AS Khera D Klein K Korownyk M Levy D Manca D Nichols S Schipper L Steblecki **Clinical Professors** K Gardener \*TD Sosnowski Associate Clinical Professors SK Aung AE Ausford **G** Blais \*MA Cherniwchan I Colliton N Flook N Hans H Hays HR Hindle M Hurlburt \*S Kelcher Cllord DS Mackey EW Papp J Parmar \*WF Patton M Reedvk **FP** Schuster \*DL Shragge H Woytiuk H Zirk Assistant Clinical Professors F Armstrong PMD Armstrong WD Armstrong DH Banmann JE Bell \*DW Bond \*HA Borkent \*M Boulanger \*JJ Brown PA Caffaro SW Chambers AYL Chiu WE Clelland DJ Cook \*R Cunningham \*CGM Evans TF Flanagan K Ghali **CR** Gingles JG Gokiert \*T Graham NM Gray \*MS Gross FH Janke RB Kaasa DA Kent MR Kolber TD Kolotvluk \*RT Kruhlak GA Lamoureux R Laughlin \*MJ Long SE Low LM Ma DP Miller \*AR Murray N Nanda \*SA Poplawski . TF Ranieri JG Reilly \*M Rico BD Ritchie JM Robinson WE Schneider MR Smith RM Stepanko

J Stickney-Lee

#### www.ualberta.ca

JR Tilley

\*AF Walker RJ Wedel **BRB** Whittaker **Clinical Lecturers** M Abbasi \*BL Abel KJM Abel T Ali JR Andreiuk DM Andriashek JB Armstrong H Bablitz **|** Bailes AL Bailey L Baker T Bakshi \*NG Barclay \*DJ Barer P Barrett JB Barsky K Bennett L Bernier-Lycka S Beshai MM Bodmer DW Boettger MA Bowland BW Boyko TB Brav \*RG Brown TJ Byers MJ Caffaro J Caufield DB Cave LA Charles JF Chiu JE Craig RF Crowe C Cull JA D'Costa NAC Da Cunha \*BC Deane LD Duion **RH** Dunbar \*B Edgecumbe LR Edwards SM Fairgrieve-Park \*SD Flanagan SC Ghitter-Mannes AC Gigg JM Godel JJ Hankinson VM Hanlon BC Hayden TL Heisler ES Holmes \*DJ Hryciuk AJ Jarema CG Johnston S Karpman PE Keith A Khan DG Killick M Knight DW Korzenowski D LaBuick DM Leung **PJ** Lewis MR Lidkea CC Lopaschuk **B** Lorrain KAH Lundgard \*K Mangan A Marin PA Marner **BW Martin** RA Martin GG Mazurek T McKeown **BK McPeak** AM Milne-Epp \*JA Mohler \*W Molberg EM Mori-Torres NJ Morison

\*MG Moss JD Murphy DL Myhre R Naiker ED Ndovi \*KD Neilson **BL Oldale** P Palma P Paludet DJ Paras J Peng A JD Pope \*RA Purser R Rajput \*DA Reid JD Ritchie M Rose JC Routledge PIA Ruiter DR Ryan G Salvalaggio JJ Saunders \*GD Scheirer G Schwalfenberg N Shahoo \*RK Sherman HS Sidhu N Sikorsky **RJ** Simard S Simon A Singh LL Smith H Sternberg \*TP Stetsko \*DF Stewart A Swinton A Tan M Taylor \*AW Ushko J Weaver DA Webb DS Welch ML Wesner \*CN Westover ML Wickland-Weller \*AK Yeung \* MJ Young **Professors Emeriti RR** Cherry GL Higgins Adjunct Professor Emeritus \*E Waugh **Faculty Service Officer** O Szafran Adjunct Professor L Meadows Adjunct Assistant Professor **B** Williams Laboratory Medicine and Pathology Chair and Professor VA Tron Professors \*BA Finegan LD Jewell \*Cle LE McGann \*TW McGaw \*J Preiksaitis **RP** Rennie K Solez \*AR Turner **Associate Professors** FJ Bamforth \*P Campbell GS Cembrowski B Chiu S Damaraju J Deschenes T Hiruki J Huah

# UNIVERSITY OF ALBERTA

HAA Idikio ES Johnson \*K Kowalewska-Grochowska **R** Kumar **R** Lai \*L. Pilarski PL Puttagunta DC Rayner L Resch LJM Russell G Tyrrell Assistant Professors J Acker T Chaba LWL Chui J Fuller R Leng E Leslie I Mirza S Nahirniak XL Pang L Shier J Xina **Clinical Professors** RC Berendt DTP Dawson **GP** Dowling WS Etches J Hannon TE Higa GH Johnson DF LeGatt \*FH Schloss Associate Clinical Professors S Anwar \*R Bergstrom G Blaknev G Clarke P Colbourne JM Danyluk RS Davey \*S Ganatra T Hiaains **GR** Jones DW Kinniburah GD Neuman C Prosser N Rayani WK Readv M Saddick ICF Sin \*IA Talbot T Thay JP Vernick D Wenzel JR West DJ Willans HWA Wu Assistant Clinical Professors K Alanen LM Ave B Balachandra **B** Bannach H Berendt G Bigras S Brown SB Cheng C Fwanowich S Girgis **HL** Gritter SF Lee PL Letendre N Lilic VL McCann DR McLean C O'Hara N Satkunan S Silverman J Slatnik AN Wessler GO Wood Professors Emeriti MK Dasgupta

\*JB Dossetor PA Gordon LH Honore (( Lin GA Machin BW Mielke G Nguyen TK Shnitka **RA Stinson RJ** Swallow **Adjunct Professors** C Hao **PN Nation** P Petrik **RF** Power M Stewart J Xing \*RW Yatscoff Medical Laboratory Science **Director and Associate** Professor FJ Bamforth Associate Professor M Keelan Assistant Professors M Fraser LE Purdy CJ Ward Lecturers **R** Martindale A Nischuk EE Rivait Clinical Lecturers M Ackney R Cunningham J Gray **R** Lane Administrative Officer JL McPhee **Medical Genetics** Chair and Professor M Walter Professors \*D Gilchrist \*I MacDonald \*H McDermid Associate Professors S Andrew JS Bamforth FJ Bamforth A IK Chan DM Glerum \*0J Lehmann NJ Leonard B Rannala **MJ** Somerville D Underhill R Wevrick Assistant Professor SL Bleoo Assistant Clinical Professors \*R Mueller **Professor Emeritus** DW Cox Medical Microbiology and Immunology Chair and Professor DH Evans Professors \*D Befus \*M Belosevic JF Elliott LJ Guilbert \*PF Halloran \*T Hobman

RT Irvin K Kane \*L Miedzinski \*C Power L Sigler JR Smiley DE Taylor DLJ Tyrrell \*LJ West M Barry E Folev \*S Forgie **B** Hazes M Stein B Lee J Nigrin **R** Verity E Diener IMS Dixon SI Hnatko D Dragon P Dickie J Gnarpe Medicine Chair and Professor JB Meddings Professor \*DL Saunders Associate Professor N Shaw Assistant Clinical Professor \*SK Aung Administrative Officer R Mah Cardiology Acting Director and Professor WJ Tymchak Professors PW Armstrong JR Burton D Johnstone

RT Tsuyuki

B Cujec

**Associate Professors** 

\*R Moqbel . HL Ostergaard \*LM Pilarski \*JK Preiksaitis \*GD Tavlor \*JH Weiner Associate Professors D Burshtyn \*AM Joffe K Kowalewska-Grochowska **MS Peppler** \*L Schang \*GJ Tvrrell \*W Vaudry Assistant Professors \*C Anderson \*L Saxinger **Clinical Professors RP** Rennie B Romanowski Associate Clinical Professor \*J Robinson **Assistant Clinical Professors** A Chandran JC Galbraith **Professors Emeriti** JW Carmichael FL Jackson BM Longenecker RG Marusyk JA Robertson **RLS Whitehouse** Faculty Service Officers

LD Lalonde ED Michelakis GJ Pearson BH Sonnenberg RC Welsh Assistant Professors TJ Bungard J Ezekowitz MM Graham G Gyenes T Hruczkowski \*MJ Kantoch PI Kaul DH Kim J Nicholson AA Pantano I Paterson I Vonder Muhll **Clinical Professors** PV Greenwood SS Gulamhusein WKK Hui Z Lakhani MPJ Senaratne DA Tavlor **RG Williams** Associate Clinical Professors NS Brass M Chan PK Cheung JB Choy TK Fenske LA Kasza T Talihi Assistant Clinical Professors Y Fu TG Muzyka KV O'Reilly ST Sivakumaran J Wong **Clinical Lecturers** DM Hammer AP lones Professors Emeriti C Basualdo **RS** Fraser M Haraphongse BI Jugdutt **RE Rossall** Adjunct Professor WC Chang Adjunct Assistant Professors \*MJ Haykowski \*CM Norris

Adjunct Associate Clinical Professor M Hoskinson

**Clinical Hematology and** Medical Oncology

Director and Professor LM Larratt

Professors \*AR Belch \*ED Bruera \*ALA Fields \*PA Gordon A Janowska-Wieczorek AR Turner

Associate Professors **DBC Ritchie** \*ARF Shaw \*PM Venner

Assistant Professors MA Hamilton AC Woods

Clinical Professor JM Turo

WA Dafoe

SKM Kimber

Medicine and Dentistry

#### 242

#### Associate Clinical Professor \*JL Hannon

\*MT Clandinin

Professor Emeritus RN MacDonald MJ Mant

#### Dermatology and Cutaneous Sciences

Director and Associate Professor Gllauzon

Associate Professors AN Lin T Salopek

**Clinical Professors** DW Groot EH Schloss

Associate Clinical Professors L Fiorillo JY Liao J Rao DM Sawyer GE Searles

Assistant Clinical Professors KW Alanen PA Lubitz BAS Lycka MB Rogers MJA Sapijaszko BM Walters NR Wasel Clinical Lecturer

TC Nakatsui

Adjunct Professor K Jimbow

Distinguished Clinical Professor J Brown Endocrinology and

Metabolism Director and Professor CLY Chik

Professors \*DN Brindley \*DC Cumming J Ginsberg \*S Harvey RZ Lewanczuk \*WA McBlain DW Morrish EA Ryan EL Toth I Vance

Medicine and Dentistry

Associate Professors GA Francis LE Mereu

Assistant Professors BW Paty PA Senior

Assistant Clinical Professors PA Hardin S Li TL McNab RS Mitchell A Opgenorth JS Romney

Professors Emeriti PM Crockford RN Eidem DM Fawcett GD Molnar A Rabinovitch

#### Gastroenterology

Director and Professor S Van Zanten

**Professors** VG Bain

**RN** Fedorak ABR Thomson Associate Professors LA Dieleman K Goodman LM Gramlich K Gutfreund M Ma KL Madsen AL Mason DC Sadowski WW Wong \*MI McBurnev Assistant Professors \*CJ Field P Grover Hiu GS Sandha CKW Wong **Clinical Professors RJ Bailey** CM Switzer **RH** Wensel **CN** Williams Associate Clinical Professors EAG Lalor JP McKaigney \*MS Millan FA Semlacher Assistant Clinical Professors A Bala RD Cherry JP Ferguson D Kao DN Todoruk Professor Emeritus **RW** Sherbaniuk General Internal Medicine **Director and Associate** Professor WJ Coke Professors NE Brown DM Gilchrist \*SC Houston BD O'Brien \*R7 Lewanczuk Associate Professors TD Duggan **RW** Fisher PG Hamilton \*RSA Hayward \*R Khurana SR Majumdar N Kassam F McAlister \*AAC Yeuna **Assistant Professors** C Goldstein F Morales **R** Padwal W Sia **Clinical Professors** WR Black KC Bowering NE Gibson E Kretzul \*GF MacDonald Associate Clinical Professors \*JS Archibald N Dean \*WJ Dickout \*IA Ferguson \*MS Millan IWI Morse MG Nutting E Raff **BJ** Wirzba

# UNIVERSITY OF ALBERTA

Assistant Clinical Professors J Allen HA Bertozzi AJ Brisebois PM Buckle **RJ Burris** DA Campbell R Chea AR Grynoch A Hendricks CF MacDonald I FR Malowany M Moreau JE Rouget CL Simpson DJ Tusz **Clinical Lecturers** A Bharmal **RA Hoseir** GJ Hrynchynshyn **Professors Emeriti** LM Anholt JB Dossetor \*RN Eidem **CH Harley** JC Hopkyns **Distinguished Clinical** Professor AJ Voth Geriatric Medicine **Director and Associate** Professor KE Lechelt Associate Professors K Alagiakrishnan AG luby Assistant Professor DB Rolfson Associate Clinical Professor \*JA Triscott Assistant Clinical Professors PM Lawson S Seneratne Professor Emeritus PN McCracken Immunology and Nephrology **Director and Professor** BJ Ballerman Professors SM Cockfield PF Halloran KK Jindal Associate Professors GB Braam PM Campbell . N Jahroudi AW McMahon AG Murrav Assistant Professors MJ Courtney SN Davison S Gourishankar JR Grynoch S Habib SW Klarenbach NI Pannu MU Qarni M Tonelli Associate Clinical Professors SS Caldwell IA Ferguson Assistant Clinical Professors S Duggan CW Johnston A Pisani

Professors Emeriti MK Dasgupta \*JB Dossetor T Kovithavongs RA Ulan \*DR Wilson Infectious Diseases Director and Professor SD Shafran Professors

SC Houston DY Kunimoto \*TJ Marrie J Miedzinski JK Preiksaitis \*CL Soskolne GD Taylor \*DJ Tyrrell Associate Professors \*L-J Chang

I Chiu AM Joffe Assistant Professors KE Doucette

SJ Rosser LM Saxinger Clinical Professor B Romanowski

Associate Clinical Professor LR Boychuk AE Singh

Assistant Clinical Professor R Ahmed Professors Emeriti EA Fanning

G Goldsand Neurology

Director and Professor

Professors MG Elleker TE Feasby JH Jhamandas WR Martin C Power KG Warren D Westaway Associate Professors

JRM Camicioli DS Fulton WSW Johnston

S Kar Assistant Professors

N Ahmed GG Blevins KS Butcher F Giuliani DW Gross TJ Jeerakathil KA Khan S Kalra TE Roberts MA Saggui ZA Siddigi \*BD Sinclair \*KG Todd Associate Clinical Professors ML Myles F Starreveld ( Tai NI Witt Assistant Clinical Professors **RN** Roberts MM Siddiqui P Stenerson **Clinical Lecturers** B Marynowski **BJ** Stewart

Professors Emeriti MH Brooke G Monckton

Adjunct Professor SA Warren

Adjunct Associate Professor NL Ashworth

Pulmonary Medicine

Director and Professor I Mayers

Professors AD Befus \*NE Brown \*NN Finer \*SM Hamilton RL Jones M King DC Lien R Long GC Man R Moqbel

Associate Professors G Broderick L Cheung RW Damant \*PA Hessel P Lacy H Vliagoftis FYL Wong

Assistant Professors M Bhutani \*M Duszyk BD McNab NM Skjodt MK Stickland D Vethanayagam JG Weinkauf

Clinical Professors NRT Gibney TK Lee

GF MacDonald Associate Clinical Professors JS Archibald WJ Dickout MK Heule S Marcushamer DE Stollery El York

Assistant Clinical Professors LS Melenka A Shustak

Adjunct Professor

**Professors Emeriti** FA Herbert BJ Sproule

Rheumatology

Director and Assistant Professor JE Homik

**Professors** SL Aaron P Davis WP Maksymowych

Assistant Professors A Oswald SO Keeling \*M Suarez-Almazor EA Yacyshyn

Clinical Professor R Ferrari Associate Clinical Professors DE Sholter KJ Skeith

Assistant Clinical Professors PL Chiu A Yan Professor Emeritus AS Russell

Obstetrics and Gynaecology

**Chair and Professor** JW Faught

Professors DC Cumming ST Davidge NN Demianczuk BF Mitchell DM Olson RW Turnell

Associate Professors VA Capstick R Chari CG Flood

M Sagle A Schepansky J Schulz

Assistant Professors S Baydock S Chandra

D Hemmings T Motan H Steed

**Clinical Professors** 

JJ Boulton LG Evenson CF Hoskins S Langton M Lieberman

G Sabourin SN Schuurmans IV Tataryn Associate Clinical Professors

G Black R Black M Bow

R Chua T Corbett TP Gleason S Genius DJ Hodges G Iwaniuk A Lee M Lieberman

MS Mah

R Uretsky Assistant Clinical Professors D Barreth RJ Brown 5 Brown E DeDoming J Griffiths S Gross G Jiwa D LaRose AM Long

J Mayo JM Ayo V Pramod M Roy W Sia F Tam J Tankel M Tauh F Tsui T Unger P Verma C Wittner-Smith B Wong W Young

**Clinical Lecturers** MJO Coe C Linton B Muir

**Professors Emeriti** RP Beck DL Dunlop

#### www.ualberta.ca

L Honore M Radomski

**Adjunct Professors** S Reid S Tough

Professor

RS Sloboda

#### Oncoloav

Chair and Professor CE Cass

**Experimental Oncology** 

**Director and Professor** D Murrav

Professors R Godbout **B** McBlain LM Pilarski ARE Shaw **MJ** Turner J Tuszvnski M Weinfeld

Associate Professor MJ Hendzel

Assistant Professors G Chan MM Hitt

**Adjunct Professors** \*TM Allen \*PF Grundy \*A Janowska-Wieczorek \*V Tron \*I Wiebe

Adjunct Associate Professors \*S Andrew \*CG Miller

**Professional Service Officer R** Mirzayans

Faculty Service Officer X Sun

#### Medical Oncology

**Director and Professor** PM Venner

Professors AR Belch ALA Fields IR Mackey

Associate Professors H Au CH Butts S North M Smylie K Tonkin

Assistant Professors 0 Chu A Joy K King S Koski KE Mulder AJ Reiman M Sawver A Scarfe

**Assistant Clinical Professors** N Chua D Fenton

Adjunct Professors \*K Courneva \*A Janowska-Wieczorek \*PF Grundy \*DW Morrish \*AR Turne

**Adjunct Associate Professors** \*SJ Desai \*LM Larratt

#### **Medical Physics**

**Director and Professor BG** Fallone

Associate Professors S Rathee DM Robinson Assistant Professors B Long M MacKenzie T Riauka Associate Clinical Professors SL Connors GC Field **B** Murray Assistant Clinical Professor H Warkentin Adjunct Professor J Cunningham **Professional Service Officer** K Wachowicz **Palliative Care Medicine** Director and Associate Professor **RL** Fainsinger Professor V Baracos Associate Professors D Oneschuk AW Taube SM Watanabe Assistant Professor C Nekolaichuk Associate Clinical Professors CF Cumming M Hundleby RA Sela Assistant Clinical Professors P Amigo I de Kock M Mirhosseini **R** Plouffe Y Tarumi V Thai J Turner Adjunct Associate Professors S Dumont \*P Koop \*KL Olson Radiation Oncology Director and Professor MB Parliament Professors D Fulton N Jha **RG** Pearcey WH Roa Associate Professors B Abdularim A Murtha R Scrimger Assistant Professors N Pervez D Yee Associate Clinical Professors S Chafe GS Dundas TS Niiiar D Severin Assistant Clinical Professors J Amanie K loseph Adjunct Associate Professor DG McGowan \*BE Krause Adjunct Assistant Professor R Halperin

# UNIVERSITY OF ALBERTA

**Professors Emeriti** AW Lees RC Urtasun

**Oncologic Imaging** Professor and Director AJB McEwan

Professor S McQuarrie

Associate Professor J Mercer Assistant Professor

E Postema Associate Clinical Professors

D Abrams A loshua Assistant Clinical Professor R MacEwan

Adjunct Associate Clinical Professor TJ Terrv

Professional Service Officer P Kumai J Wilson

#### Surgical Oncology

**Director and Adjunct** Professor CJ de Gara

Adjunct Professors N Kneteman **RB** Moore

# Adjunct Associate Professors

DL Bigam VA Capstick A Schepansky J Shapiro Adjunct Clinical Professor K Petruk Adjunct Associate Clinical Professor H Seikaly Adjunct Assistant Clinical Professors G Lavoie

### Ophthalmology

Acting Chair and Professor GT Drummond Professor IM MacDonald (On leave)

Associate Professor OJLehmann

Assistant Professors SM Chan CJ Rudnisky K Sabri Y Sauve **Clinical Professors** FL Leong-Sit RA Morgan **KH Shutt** Associate Clinical Professors J Buski **RJ** Casey D Climenhaga H Climenhaga M Greve EJ Hodges **RLC Johnson** M Kutzner **JR** Lewis **FI Rudnisky** 

LM Uniat

D Cote

MC Edwards

Assistant Clinical Professors

KR Hennig B Hinz J Leona-Sit FA Macdonald JB McCabe M Tennant **Clinical Lecturers** M Scambler B Wakeman **Professors Emeriti** WG Pearce HT Wyatt Paediatrics Chair and Professor T Klassen Professors C Baxter Y Coe RM Couch J Dyck P Etches P Grundy AB Jones M Kantoch T Lacaze GD Lopaschuk P Massicotte \*DM Olson H Rajani **CMT** Robertson J Robinson J Smallhorn J Van Aerde W Vaudry J Watt L West J Yager Associate Professors D Andrews L Baizar P Cheuna IW Craig L Dibden JR Dyck JE Ellsworth S Gilmour **R** Girais KJ Goulden M Gowrishankar **R** Lehner \*M Michalak L Mitchell R Persad I Rebeyka M Robertson J Robinson **R** Rosychuk R Schulz **B** Sinclair DW Spady K Stobart **B** Thebaud S Vohra 1 Wincott V Yiu L Zwaigenbaum **Assistant Professors** D Adamko S Ali J Andersen R Arent L Babu S Baksh G Ball S Beno L Casey P Cheung B Clark A Crocco S Curtis A Davies I Dhunnoo

C Dosman N Dower M Enarson I Evered K Forbes S Forgie S Grewal D Hartfield H Huynh M Jetha H Kolski M Lang S Lappa B Lee J Lee **M** Lewis C Majaesic S Marks T Masterson D McConnell M Pinsk L Richer M Spavor E Swartz J Turner T Turner K Waters M Witmans A Witol J Wong **B** Wright **Clinical Professors** DJ Hasinoff **RR** Moriartey A Peliowski J Popowich AR Stewart MI Tedeschini OA Ulan Associate Clinical Professors **KB** Anderson G Andrew L Baydala P Byrne A de Caen S Galante K Lee \*GM Lees F Martin TJ Paton E Phillipos PM Pierse EM Rabinovitch M Somerville J Tyebkhan KS Wong PC Zuberbuhler Assistant Clinical Professors J Ackland-Snow N Anton A Ausford D Berry M Bhambhani l Buka S Carr R Chen W Doyle-Chan EW Harris K Horne B Islam A Janicka A Joffe H Iou A Kantoch C Kyriakides SL Lee **RP** Lemke L Leauier Plidman JE Lopatka A Malik **BA Malinowski** LF McGonigle K Meier

A Murdock H Osiovich VM Osundwa S Petrvk D Radisic ML Ramji D Roseman E Schuster L Sim G Sukhrani WA Szymanski J Teoh T Vander Leek **B** Wilson S Wong **Professors Emeriti** J Akabutu NF Duncan E Gauk J Godel \*I C Grisdale F Harley EE McCoy PM Olley HF Pabst Administrative Officer G Langer Haematology and Oncology **Director and Professor** P Grundy Associate Professors \*SJ Desai K Stobart **Assistant Professors** N Dower M Spavor BA Wilson Infectious Diseases **Director and Professor** 

AN Mian

\*JC Mullen

243

W Vaudry Professor JL Robinson Assistant Professor Neonatology **Director and Professor** JE Van Aerde Professors PC Etches A Pelowski Associate Professor

# **EZ Phillipos** Paediatric Cardiology

**Director and Professor** JD Dyck

Professors JY Coe M Kantoch

S Forgie

Associate Professor MA Robertson

**Professors Emeriti** NF Duncan PM Olley

**Paediatric Intensive Care** 

Director and Associate Clinical Professor A Conradi

Associate Clinical Professor A deCaen

Assistant Clinical Professors A loffe L Lequier

#### 244

#### Pharmacology

Chair and Professor

AS Clanachan Professors TM Allen WF Colmers DA Cook WF Dryden SMJ Dunn \*GD Lopaschuk \*IL Martin R Schulz PA Smith AAC Yeung

Associate Professors \*P-Y Cheung \*JRB Dyck AL Hudson PE Light E Posse de Chaves AM-W Tse FW-Y Tse

Assistant Professors A Holt

PE MacDonald S Sipione

Professors Emeriti EE Daniel GB Frank WP Gati RM Henderson

Faculty Service Officer M Davies

Administrative Officer JC Deuel

#### Physiology

Medicine and Dentistry Chair and Professor (I Cheeseman Professors K Ballanyi \*B Ballerman JR Casev CB Chan \*ST Davidge JJ Greer S Harvev AKC Ho SE Jacobs \*I W Kline \*BF Mitchell \*DM Olson KG Pearson A Prochazka EJ Sanders JD Youna **Associate Professors** SC Barton CG Benishin \*GB Braam X-Z Chen M Duszyk GD Funk \*RZ Lewanczuk PV Nguyen

> Assistant Professors E Cordat S Gosgnach EM Leslie \*Y Sauve

**Professors Emeriti** KJ Hutchison E Karpinski RB Stein

Adjunct Professors \*GR Foxcroft \*RL Jones

Administrative Officer BA Armstrong

Psychiatry Chair and Clinical Professor **PIWhite** Professors **GB** Baker Al Greenshaw GS Hnatko AS Joyce SC Newman PH Silverstone Associate Professors NJ Coupland W Friend S Kar J LeMellédo P Tibbo KG Todd Assistant Professors A Chov **B** Dick E Fuiiwara **Clinical Professors** JL Banasch (Associate Chair) J Beach M Blackman CA Blashko AB Bremness AM Carroll KM Collinson P Copus N Costigan J Eustace P Flor-Henry KD Gendemann A Gordon CA Hapchyn **RF** Hibbard L Kagan J Kennedy S Levin M McCallum JG O'Kelly L Pawluk SF Purdon HM Piktel J Rodgers JS Rosie PM Segal T Snyder B Sowa PI Steinberg 1 Studer LB Warneke HM Wojcicki M Yaltho Associate Clinical Professors LM Adams C Buchholz 0 Cadskv PE Carr WT Chimich P Chokka P Chue JM Dewart R Drebit RJ Dvck DR Guinhawa RA Gurke Flobo WA McCay P Mills **BR** Mirtle JW Osinchuk **MB** Parsons **BS** Sanderman D Shih **B** Stich M Swanson M Tweddle L Urichuk DYW Wong

#### Assistant Clinical Professors GR Acton H Anand B Bishop D Block C Carter I Chohan **M** Cummins **M** Demas C Els **CK Froelich** DR Ginter IM Hinton 0 Hodlevskyy ND John AL Khaliq K Kirdeikis **K** Lawless A Leuna Dli **RC Lundeen** R Maitra S Matthews E McKaigney DW Meakins C Moreau F O'Croinin LJ Phillips A Poukhovski T Prior S Santana G Schoepp JR Scott Y Shapiro L Smith C Steinberg L Stovel **RP** Taubner A Witol N Youssef **Clinical Lecturers** F Bahrey D Bailey F Boffa S Bowman M Buchinski L Caffaro J Carr J Caryk J Chu A Coiocaru K Costello R Dempsey SC Duncan J Edstrom L Elwell N Fisher FM Fogarty SC Frank J Gillese J Hibbard T Hugie **G** Kellv L Leclair TR Leiper L Litwinson J Long S Mitchell C Morhaliek K Morin G Mowat P Nadon D Nahirney SP Nigam J O'Mahoney L Ostolowsky R Oswald H Pazderka-Robinson **CL** Phillips R Rabeeh **R** Russell **R** Seutter V Singh DL Spaner D Spence

B Stonehocker F Ullah **J** Ustina Professors Emeriti RC Bland **RT** Coutts P Havs **B** Sinha Administrative Officer L Berends Adjunct Professors AN Bateson N el-Guebalv \*KM Hegadoren H Jacobs \*MB Parent WE Piper C Power B Rowe E Starreveld GD Watson NI Witt J Yager Adjunct Associate Professors P Nguyen TC Wild Adjunct Assistant Professors S Duggal A Holt Radiology and **Diagnostic Imaging Diagnostic Radiology Chair and Associate Professor** RGW Lambert **Program Director & Assistant** Clinical Professor S Naik Professors \*PS Allen \*AH Walii **Associate Professors** \*C Beaulieu R Bhargava D Emerv AH Wilmar Assistant Professors S Dhillon LJ Filipow M Noga R Owen R Thompson **Honorary Professor** \*M Grace **Clinical Professors** G Andrew **RC** Hennig MA Johnson MT Sin **Associate Clinical Professors** T Ackerman T Alexander W Anderson R Arnold **RA Ashforth** G Askew J Barrie I Birchall MK Hirji M Hutson S Jackson H len GLauf L Le CG Maguire M O'Keeffe G Raymond D Reich WI Ritchie

UNIVERSITY OF ALBERTA

K Siminoski G Sterling TJ Terry GP Trepanier DB Vickar RS Warshawski E Wiebe Assistant Clinical Professors S Adams S Appavoo W Berezowsky A Bistritz **B** Campbell K Cheuna C Chmielowiec N Cochrane T Elliot D Foster S Greenspan **BD** Guspie R Holub T Horwitz WG Keenan A Kumar N Lakis K Lee C Lummer KG Magnus P Maguire M McCarthy W Parker L Paskar V Patel EJ Preville KN Puznak **B** Rawat H Shein R Sherlock T Spiers A Stewart-Kanigan W Sugars JF Swersky AS Tang **B** Tavlor JGE Turner **R** Turner G Van der Merwe B Ward T Yeo **Clinical Lecturers** J Abele J Baron S Bhutani T Black CG Elias J English JP Hyde M Janicki M Janoski S Kitav T Kotylak C Lywood S Manii NE Maslo M Partrick **R** Pawluk M Scott DA Shamchuk H Sidhu A Singh M Smerdely C Torbiak Clinical Instructor C Olsen Professor Emeritus DB Russell Nuclear Medicine **Program Director and** Associate Clinical Professor H Jen Professor \*AJB McEwan

www.ualberta.ca

Associate Clinical Professors R Arnold M Hoskinson C Maguire M O'Keeffe RS Warshawski

Assistant Clinical Professors C Chmielowiec AS Tang B Taylor

# Surgery

Chair and Professor DM Hedden

Associate Chair, Equity and Faculty Development KD Dabbs

Administrative Officer TM Vanden Broek

**Office of Surgical Education** D Madu

### Cardiac Surgery

Director and Clinical Professor A Koshal

Professor \*DW Chin

Clinical Professors ET Gelfand A Koshal JC Mullen \*IM Rebeyka DB Ross

Associate Clinical Professors \*CR Guenther DL Modry S Wang

Assistant Clinical Professor R MacAurthur

Adjunct Professors \*DE Johnstone \*RW Yatscoff \*LJ West

Assistant Adjunct Professor CM Norris

#### General Surgery

Director and Associate Clinical Professor M Chatenay

**Professors** CJ de Gara SM Hamilton NM Kneteman AMJ Shapiro

Associate Professors DL Bigam DW Birch SL Logsetty DC Williams

Assistant Professors RJ Brisebois JS White

Clinical Professors RA Hallgren DW Jirsch WJ Mackie

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

#### www.ualberta.ca

\*JK Mahood

EA Plewes AW Procyshyn MH Stephens WM Struck

Assistant Clinical Professors D Berg D Callahan CI Ciona J Kennedy JD Matheson C Sample AVF Sobey AF Trautman RG Turnbull GB Winkelaar WJ Yakimets **Clinical Lecturers** K Alibhai D Filips

0 Heisler ST Mortimer D Olson Professors Emeriti KL Bowes S Kling

RAL Macbeth GW Scott OG Thurston WW Yakimets

**Adjunct Professors** \*TW Theman \*AH Walii

Adjunct Assistant Professor Slssa

### Neurosurgery

**Director and Clinical** Professor KC Petruk

Associate Professor \*KE Aronyk

**Clinical Professors** JM Findlay JDS McKean KC Petruk

**Associate Clinical Professors RJ Fox** DE Steinke

**Assistant Clinical Professors** RW Broad V Mehta WJ O'Callaghan BM Wheatley

**Clinical Lecturers** MM Chow AKY Natarai

**Professor Emeritus BKA Weir** 

**Orthopaedic Surgery** 

Director and Associate **Clinical Professor** DD Otto

Professors \*KM Bagnall \*DM Hedden DC Reid

**Assistant Professors** \*SK Dulai H Jiang NM Jomha

**Clinical Professors** RM Glasgow DWC Johnston \*MI Moreau

**Associate Clinical Professors** JG Cinats PMK Leung

\*JB McIvor DD Otto GG Russell Assistant Clinical Professors GD Arnett RA Balvk MI Bouliane D Dick GR Goplen TH Greidanus **RL Henderson** LE Hunka **KW** James FB Kortbeek GJ Lavoie **MV** Lavoie EC Masson JF McMillan GLO'Connor DW Weber **Clinical Lecturers** J Bury RRM Glasgow A Lalani PJ Paul A Scharfenberger DM Sheps **RE** Steigelmar J Wagg **Clinical Instructor** BJ Greenhill Associate Adjunct Professor WA Moussa Assistant Adjunct Professors I A Beapre \*JS Hebert D Hill WM Lou \*DJ Naidu V Raso Otolaryngology **Director and Associate** Professor H Seikaly Assistant Professors JR Harris \*TC Uwiera Associate Professor H Seikaly **Clinical Professors** CS Carter WH Kudryk DJ Oldring Associate Clinical Professors JD Keohane **R** Liu **Assistant Clinical Professors** MW Allegretto JC DiToppa Clinical Lecturers OM Bykowski \*EC Eksteen \*H El-Hakim JA Kostiuk Pediatric Surgery Director and Professor DM Hedden Professor DM Hedden Associate Professor KE Aronyk

Assistant Professors SK Dulai D Kiddoo PD Metcalfe \*J Olson

# UNIVERSITY OF ALBERTA

\*K Sabri TC Uwiera Clinical Professors \*RA Hallgren MJ Moreau IM Rebeyka \*DB Ross \*GH Wilkes Associate Clinical Professors \*DO Adams \*PD Davey MG Evans \*GM Lees JK Mahood JB McIvor Assistant Clinical Professors \*D Dick H El-Hakim \*G Louie **Clinical Lecturer** EC Eksteen Plastic Surgery Director and Clinical Professor **GH** Wilkes Professors \*LE McGann \*PG Scott

EE Tredget Associate Professor \*SL Logsetty

Assistant Professors 1 Olson \*D Wu

GL Lobay GL Moysa GH Wilkes Associate Clinical Professors DD Campbell M Morhart Assistant Clinical Professors

Clinical Professors

DC Edwards MJ Giuffre T Hayashi G Louie T Riegel **Clinical Lecturers** 

R Grover **BM Mehling** J Wolfli

**Professor Emeritus** JDM Alton Adjunct Professor

S Nagata

### Surgical Research Director and Professor

EE Tredget Professors GS Korbutt

EE Tredaet Associate Professor

**RV** Rajotte

**B** Agrawal Assistant Professors CC Anderson TA Churchill G Rayat

D Wu Faculty Services Officer LF Zhu

Professors Emeriti **KP Kowalewski** GW Scott DC Secord

Adjunct Professors MP Mintchev \*RW Yatscoff \*LJ West Assistant Adjunct Professor

Thoracic Surgery

**Director and Associate** Professor TL Winton

A Gainer

Associate Professor TL Wintor

Assistant Professors E Bedard KC Stewart

Assistant Clinical Professor A Valii

Urological Surgery **Director and Clinical** 

Professor MP Chetner

Professor **RB** Moore Associate Professor

GT Todd Assistant Professors \*D Kiddoo \*PD Metcalfe KF Rourke

**Clinical Professor** MP Chetner

Associate Clinical Professors DR Mador JB Metcalfe **Assistant Clinical Professors RP** Abele B Bochinski DJ Bochinski EP Estey HJ Evans GJ Gray

**MN** Weisler TA Wollin **Professors Emeriti** WH Lakey MS McPhee

M Hobart

JO Metcalfe Associate Adjunct Professor KN Moore

**Faculty Divisions** 

Alberta Diabetes Institute

Scientific Director RG Gill

**Executive Director** PD Taylor

Anatomy **Director and Professor** 

AH Walji Professors

KM Bagnall DA Begg

Associate Professor \*L Satkunam

Assistant Professors P Lemelin DLivv

Lecturer A Farias

Professors Emeriti TS Leeson

K McFadden DB Russell HIA Zaw-Tun

**Continuous Professional** Learning

**Director and Professor** C de Gara

**Assistant Directors** D Klein SELow

PhD Educator/Researcher Louanne Keenan

**Critical Care Medicine** 

**Director and Professor RTN Gibney** 

Professors WD Chin \*I Mayers \*E Tredget \*T Winton

**Associate Professors** \*PC Etches \*A Peliowski \*M Stephens

Assistant Professors PG Brindley \*R Brisebois \*L Cheuna \*S Duggan \*DJ Kutsogiannis \*S Logsetty \*N Pannu NJ Skjodt \*M Tonelli

Associate Clinical Professors \*A Conradi \*M Heule \*RG Johnston \*M Meier \*DL Modry \*W Murtha \*DE Stollery

**Assistant Clinical Professors** \*A deCaen \*CR Guenther

D Hudson \*M Jacka \*A Joffe \*A Liu \*S Marcushamer \*ID Matheson R McDermid \*M Meier \*J Mullen \*A Shustack \*A Sobey

D Townsend **Clinical Lecturers** M Henry F Rokosh M 7ibdawi

**Health Sciences** Laboratory Animal Services

Director and Associate Professor P Gasper

**Faculty Service Officers** G Parks **RF** Uwiera

John Dossetor Health **Ethics Centre** 

Director and Professor \*RJ Sobsey **Clinical Professor** 

\*P Byrne

Professor \*W Austin

**Associate Professors** \*G Griener \*I Shanne

Assistant Clinical Professor \*B Leier

Adjunct Professor E Blyth

Associate Adjunct Professor \*D Truscott

Assistant Adjunct Professors \*T Bailev R Damant GJ Goldsand

\*P Marck \*L Shields

**Professor Emeritus** \*V Bergum \*JB Dossetor

Neuroscience

Professors

Director and Professor \*KG Pearson

\*N Asworth \*GB Baker \*K Ballanyi D Bennett \*WF Colmers \*WF Dryden S Dunn \*T Gordon \*AJ Greenshaw \*JJ Greer \*S Harvey \*JH Jhamandas \*TL Krukoff \*WR Martin D Pilgrim \*C Power \*A Prochazka \*A Shuaib \*P Silverstone \*PA Smith A Spencer D Treit

#### D Wong-Wylie \*J Yager J Yang Associate Professors DW Ali CA Boliek \*R Camicioli \*KM Chan F Colbourne D Collins CT Dickson K Fouad \*G Funk \*S Kar J Misiaszek \*P Nguyen \*E Posse de Chaves (T Putman \*P Tibbo \*KG Todd \*A Tse \*F Tse \*R Wevrick EP Zehr

Assistant Professors J Caplan P Davidson **B** Dick \*M Gorassini KM Hegadoren P Hurd \*K Jones \*D Livy BKV Maraj

\*V Mushahwan Y Sauve A Singhal \*S Sipione C Sturdy CF Westbury

Clinical Professors P Flor-Henry \*KC Petruk

Adjunct Professor \*JC Lind

Emeritus Professors \*RB Stein AR Dobbs S Kumar D Peter

#### Physical Medicine and Rehabilitation Medicine

**Director** N Ashworth

Professor T Gordon

Clinical Professors LA Bellamy (Emeritus) M Watt

Associate Professors KM Chan L Satkunam RS Burnham S Gray

Assistant Professors J Hebert D Naidu

Associate Clinical Professors JB Guthrie JM Nagy

Assistant Clinical Professors M DiPersio E Sampson C Tuchak J Townsend Clinical Lecturers J Irvine Adjunct Professors B Dafoe N Dean P Gordon \*RB Stein Studies in Medical

Education Director and Professor

\*DA Cook Associate Director and

Professor \*SL Aaron

Assistant Professor \*E Dyck (History)

**Educational Associates** \*FR Brenneis (Family Medicine) \*P Brett-MacLean \*VA Capstick (Obstetrics and Gynecology) \*CI Cheeseman (Physiology) \*C de Gara (Associate Dean, **Continuous Professional** Learning) \*MG Donoff (Family Medicine) \*L Keenan (Continuous Professional Learning) \*NJ Leonard (Genetics) \*S Logsetty (Surgery) \*L Miedzinski (Infectious Diseases) \*J Parmar (Geriatric Medicine) \*DC Rayner (Associate Dean, UGME, Laboratory Medicine and Pathology) \*B Roed \*L Saxinger (Infectious Diseases) \*I Steiner (Family Medicine) \*K Stobart (Pediatrics)

#### Research Associates

- \*D Blackmore (Medicine Council of Canada) \*R Damant (Medicine) \*BW Fisher (Medicine-General Internal Medicine)
- \*L Laing (Public Health Sciences) \*M Sagle (Obstetrics and
- Gynecology)

Professor Emeriti G Goldsand Faculty Service Officer and Adjunct Associate Professor D Harlev

Surgical-Medical Research Institute

Director and Professor \*RV Rajotte

#### Additional Members of Faculty Council

President and Vice-Chancellor IV Samarasekera, OC

Representatives J Buckingham (Medical Librarian) C Byrne (Registrar, U of A) H Campbell (Alberta Dental Association) J Foght (Faculty of Science) A Cook (Dean, Faculty of Rehabilitation Medicine) ALA Fields (Cross Cancer Institute) R Bland (Alberta Mental Health Board) M Gormley (Alberta Medical Association) M Mahon (Dean, Faculty of Physical Education & Recreation) B Horsburgh (Dean, Faculty of Nursing FM Pasutto (Dean, Faculty of Pharmacy and Pharmaceutical Sciences) M Rowe (Community Care & Public Health, CHA) R Ponech (Senate Liaison) L Best (Senate Liaison) G Predy (Medical Officer of Health, CHA) K Keough (Alberta Heritage Foundation for Medical Research) J-M Turc (Alberta Cancer Board) B Walker (Alberta Dental Hygienist Association)

# 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 Canada.
- (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.

# 112.1 Department of Dentistry Objectives

- To provide an academic and intellectual milieu in a university setting that facilitates all aspects of education and research in dentistry and allied health and scientific fields by
  - a. attracting, selecting, and motivating the most qualified academic and non-academic staff; and
  - b. creating a university environment that emphasizes the quality of life for staff and students.
- (2) To contribute to the advancement of knowledge in dentistry and allied fields by doing research, publishing research papers, and communicating and interacting with
  - other health sciences and other disciplines of the University to promote comprehensive health care;
  - b. the dental profession, dental auxiliaries, auxiliary-training programs, and the community to promote oral health; and
  - c. basic and clinical science organizations and granting agencies to promote disciplinary and interdisciplinary research.
- (3) To graduate competent undergraduate dentistry students, dental hygiene students and graduate and postgraduate students by
  - attracting, selecting, and then motivating the most suitable and wellqualified students who have the ability to acquire the education and training for a professional and/or academic career;
  - b. maintaining an undergraduate dentistry curriculum that integrates basic medical and dental sciences, behavior and social sciences, dental clinical sciences, community and preventive dentistry, hospital dentistry, and practice management; incorporates recent concepts, materials, techniques, advances, and research in all areas; and reflects the existing and projected provincial, national, and international oral health needs;
  - c. maintaining a dental hygiene curriculum that produces students who will complement the present and future dental care delivery system;
  - maintaining an education program that allows for the smooth transition from graduation to practice and ensures that students are competent to practise efficiently and responsibly; and
  - e. graduating 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.
- (5) To provide efficient and quality dental treatment for the community that emphasizes and recognizes patient needs.

# 112.2 Affiliated Hospitals and Institutions

# 112.2.1 Affiliated Hospitals

The Faculty of Medicine and Dentistry, University of Alberta, conducts its undergraduate, postgraduate and continuing clinical education activities through affiliation agreements and/or special arrangements with appropriate hospital authorities, both within and beyond the Capital Health Region of Alberta. 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, and the Cross Cancer Institute.

### 112.2.2 Family Medicine Rural Teaching Sites

The Department of Family Medicine has an educational relationship with 8 of 9 Regional Health Authorities. Currently, over 33 rural communities participate in undergraduate and postgraduate education initiatives.

### 112.2.3 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 Institute

The University of Alberta Surgical-Medical Research Institute (SMRI) is a multi-user facility that provides laboratory space and equipment for research activities of research investigators, fellows, and graduate students 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. The Institute offers four postgraduate courses, three of which are prerequisites for the MSc and PhD degrees in experimental surgery.

# 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 the Alberta Cancer Board (ACB) (the provincial health authority for cancer) that provides cancer services for northern Alberta and houses the Department of Oncology. The ACB and the University of Alberta conducts its cancer research and training programs through an affiliation agreement.

# 112.3 Registration and Licensing

# 112.3.1 DDS Degree

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

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

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

Graduates are also eligible to write 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 2006–2007; figures are subject to change without notice.

Additional Costs for DDS Students	Year 1	Year 2
Books	1,200	1,100
Dental Kits	15,400	0
Dental Students Association	170	170
	Year 3	Year 4
Books	600	400
Dental Kits	3,500	600
Dental Students Association	170	170
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 2006–2007; figures are subject to change without notice.

Additional Costs for DH Students	Year 2	Year 3
Books	900	600
Dental Hygiene Kits	4,800	2,000
Membership Fees	90	90
Professional Exam Fee (refer to www.ndheb	.ca) N/A	500

**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 2006–2007; figures are subject to change without notice.

Additional Costs for Students	Year 4
Books	900
Dental Hygiene Kits	N/A
Membership Fees	100

# 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 2006–2007; figures are subject to change without notice.

Additional Costs for Students	Year 1	Year 2
Books	1,000	400
Dental Kits	17,000	600
Membership Fees	170	170
National Dental Examining Board (refer to www.ndeb.ca)		N/A

# 112.4.6 MD Degree

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, 2-45 Medical Sciences Building; 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.

# 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.

# 113.1.1 Combined Program for the Degrees of MD and PhD

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

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

Students interested in such a program may obtain further information from the Office of Research, Faculty of Medicine and Dentistry, 2J2.11 Walter C Mackenzie Health Sciences Centre.

# 113.2 Academic Standing and Graduation

# 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 Placements, Professional Practice and the Public Interest and §87, GFC Policy Manual).
- (3) The Council of the Faculty of Medicine and Dentistry approves the principle that the means of assessing a student's progress and determining a student's grades may vary from one course to another in accordance with the nature of the course. Factors other than examination results may be used to a variable extent by instructors in determining grades.
- (4) Students are advised at the beginning of each course and year of the procedures to be used in their evaluation, the determination and reporting of their grades, and the standards required by the Faculty. Students are also advised of the procedures for appeal established with the Faculty and the University. Students must satisfactorily complete all components of all courses.
- (5) On their official transcripts students are not ranked or assigned a numeric grade, but are designated as having passed (received credit) or failed a course.

### (6) Reexaminations

- a. Students are allowed reexamination privileges only in courses that are failed.
- b. The 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.
- 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.
- j. 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.
  - a. No student may proceed to any subsequent year of the DDS program and will be required to withdraw unless they have passed all courses for that academic year.
  - 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.
  - b. Special Category Repeating Student: a student who fails to meet some requirements in the final-year of the program may be designated a Special Category repeating student. In order to be considered as a Special Category repeating student in fourth-year Dentistry, the student must
    - have clinical deficiencies in no more than two clinical disciplines and have been advised that the deficiency could be corrected within one term of instruction; and
    - ii) have successfully completed all written examinations in the DDS program.

Further information regarding the Special Category repeating student may be obtained from the Department Office. Students repeating the final year are not eligible for awards.

- (9) Voluntary Withdrawal: A student wanting to temporarily withdraw registration from the DDS program is required to make written application to the Associate Dean of the Faculty of Medicine and Dentistry, stating the reasons for withdrawal and the intended period of withdrawal. Readmission to the DDS program following voluntary withdrawal is based on the following:
  - a. A review, by the Faculty, of the reasons for withdrawal and of the student's academic record.
  - b. Availability of a place, within quota, in the class to which the student seeks readmission. Priority is assigned in the following order:
    - i) Students who have met normal promotion requirements
    - ii) Faculty-approved repeating students and students returning after voluntary withdrawal, in order of academic standing
  - c. The length of time the student interrupts studies leading to the DDS degree must not exceed two years in total.
- (10) Faculty Advisor: At the discretion of the Faculty, an advisor may be assigned to students having difficulty meeting promotion requirements. The method

of assignment and role of the advisor is determined by the Faculty and/or Department.

- (11) All students registered in the Dentistry program are required by provincial legislation to be registered in the Educational Register of the Alberta Dental Association and College. This registration permits the practice of dentistry within the confines of the formal dental curriculum. Students in the DDS program are required to adhere to the professional code of ethics of the Alberta Dental Association and College (See §30.3.3 of the *GFC Policy Manual*).
- (12) Medical Examination: Students admitted to the DDS Program are required to present a certificate of satisfactory medical examination from a University of Alberta Health Centre physician. This requirement must be met before orientation.

To ensure, insofar as possible, both student and patient safety, the Faculty requires immunization against, or proof of immunity to, poliomyelitis, diphtheria, tetanus, measles, mumps, rubella, and hepatitis B.

As well, varicella titre and a 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 Dentistry, 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: 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. 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 the DDS program will not be completed (see \$15.9.7).

For those applicants who test negative to Hepatitis B surface antigen and are registered in the DDS Advanced Placement 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. 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 Placements, Professional Practice and the Public Interest and §87, GFC Policy Manual.)
- (3) The Council of the Faculty of Medicine and Dentistry approves the principle that the means of assessing a student's progress and determining a student's grades may vary from one course to another in accordance with the nature of the course. Factors other than examination results may be used to a variable extent by instructors in determining grades.

- (4) Students are advised at the beginning of each course and year of the procedures to be used in their evaluation, the determination and reporting of their grades, and the standards required by the Faculty. Students are also advised of the procedures for appeal established with the Faculty and the University. Students must satisfactorily complete all components of all courses.
- (5) On their official transcripts students are not ranked or assigned a numeric grade, but are designated as having passed (received credit) or failed a course.

#### (6) Reexaminations

- a. Students are allowed reexamination privileges only in courses that are failed.
- b. The 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.
- h. The reexamination mark (as in the case of a deferred mark) will replace the original final exam mark.
- i. 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.
  - 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.
  - b. A student who fails more than two courses in any year of the program will be required to withdraw from the program.
  - c. 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 (See §30.3.3 of the GFC Policy Manual).

(12) Medical Examination: Students are required to present a certificate of satisfactory medical examination from a physician of a University of Alberta Health Centre as part of the Faculty requirement before the Preclinical Assessment period.

To ensure, insofar as possible, both student and patient safety, the Faculty requires immunization against, or proof of immunity to, poliomyelitis, diphtheria, tetanus, measles, mumps, rubella, and hepatitis B.

As well, varicella titre 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.

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. 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 the DDS Advanced Placement Program will not be completed.

For those applicants who test negative to Hepatitis B surface antigen and are registered in the DDS Advanced Placement 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. 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.

# 113.2.3 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.

- 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  $\star 6$  or more from the full course load of their academic year will not be eligible for awards.

- (3) 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 Placements, Professional Practice and the Public Interest and \$87, GFC Policy Manual.)
- (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.

- (5) 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  $\star$ 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.

- Students are allowed reexamination privileges only in courses that are failed.
- b. The Department of Dentistry Academic Standing Committee and the Faculty Academic Standing and Promotion Committee must approve reexaminations for students who fail one or two courses. Students with more than two failed courses in any academic year will not be allowed reexamination privileges.
- c. The Department of Dentistry Academic Standing Committee may allow reexamination of the didactic component of a course if a student fails the didactic component of a clinical course but passes the clinical portion. Reexamination is not permitted in courses that are entirely clinical or in clinical components of courses that include both didactic and clinical components.
- A student repeating a year is not allowed reexamination privileges in that year of the program.
- e. If a reexamination is approved, satisfactory completion of a remedial program may be required by the Faculty of Medicine and Dentistry Academic Standing and Promotion Committee before the student is permitted to take the reexamination.
- f. Students are advised that it is not possible to make a ruling regarding remediation or reexamination until all grades for a year are received and recorded.
- g. The weight of reexamination is at least that of the final examination, but may be more (at the discretion of the Program Director in consultation with the course coordinators).
- h. The reexamination mark (as in the case of a deferred mark) will replace the original final exam mark. Regardless of the mark awarded in a reexamination, the final course grade may not exceed C+. Reexamination results do not alter the student's class standing.
- 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.
- k. During the Dental Hygiene Diploma program, reexamination privileges will not exceed four reexaminations or a maximum of ★18. For students continuing on to the Dental Hygiene BSc program, the total reexamination privileges will not exceed five reexaminations or a maximum of ★20.

#### (8) **Reexamination Procedure**

- a. The Faculty of Medicine and Dentistry Academic Standing and Promotion Committee will specify by course the reexaminations required of a failed student for the purposes of meeting promotion/graduation requirements.
- b. 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 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  $\star 6$  or more from the full course load of their academic year will not be eligible for awards.

- (11) A Special Category repeating third-year Dental Hygiene Diploma student or Special Category repeating Dental Hygiene BSc student.
  - a. has achieved a minimum GPA of 2.7 in the year requiring repetition;
  - b. has clinical/practicum deficiencies in no more than two clinical courses and is advised that the deficiency could be corrected within a fourmonth period of instruction; and
  - c. has successfully completed all written examinations in the Dental Hygiene program.
- (12) Voluntary Withdrawal: A student wishing to temporarily withdraw registration in the Dental Hygiene Programs is required to make written application to the Dental Hygiene Program Director, stating the reasons for withdrawal. Readmission to the Dental Hygiene programs following voluntary withdrawal will be based on the following:
  - Review, by the Faculty of the reasons for withdrawal and the student's academic record;
  - b. Availability of a place, within quota, in the class to which the student is seeking readmission. Priority will be assigned in the following order:
    i) Students who have met normal promotion requirements.
    - ii) Faculty approved repeating students and students returning after voluntary withdrawal, in order of academic standing.
  - c. The length of time the student interrupts studies leading to the Dental Hygiene Diploma or Bachelor of Science (Dental Hygiene Specialization) programs must not exceed two years in total.
- (13) Faculty Advisor: At the discretion of the Faculty, a Faculty advisor may be assigned to students having difficulty meeting promotion requirements. The method of assignment and the role of the Faculty advisor is determined by the Faculty.
- (14) Medical Examination: Students admitted to the Dental Hygiene Program are required to present a certificate of satisfactory medical examination from a University of Alberta Health Centre physician. This requirement must be met before orientation. 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 tuberculin skin test are required in the first year of the program and should be performed by the University of Alberta Health Centre.

For students in Dental Hygiene, 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: 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 at the University of Alberta. 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" antigen or Hepatitis B viral DNA is positive, the offer of acceptance will be withdrawn and registration in the Dental Hygiene Program will not be completed. (See §15.9.4).

For those applicants who test negative for Hepatitis B surface antigen and are registered in the Dental Hygiene program, Hepatitis B vaccination will be required. An exception will be made for those who are medically contraindicated or 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. 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.

Students admitted to the Dental Hygiene program are required to present a certificate of satisfactory medical examination from a physician of the University of Alberta Health Centre as part of the Faculty requirement.

 $\ensuremath{\textbf{Note:}}$  For updates on changes to medical testing and immunization refer to the Faculty Office.

### 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.)

- (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 Placements, Professional Practice and the Public Interest and §87, GFC Policy Manual.)
- (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:
  - 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. At the end of fourth year, students take a comprehensive examination (denoted as MED 540) covering material presented in all four years of the program. Students must pass all clinical clerkship requirements in Years 3 and 4, excluding MED 540, before they will be allowed to take the comprehensive examination. The Academic Standing Committee will review eligibility for writing the comprehensive exam after students have met all clinical clerkship requirements, normally in late March.
  - 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.
- b. 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.
- e. 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.
- h. 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.

- a. No student may proceed to any subsequent year of the medical program and will be required to withdraw unless they have passed all courses for that academic year.
- b. Students who do not pass all Year 3 and 4 courses, excluding MED 540 (comprehensive exam) will not be allowed to write the comprehensive exam and will be required to withdraw.
- c. 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.
  - b. 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:
    - i) students who have met normal promotion requirements.
    - ii) Faculty approved repeating students and students returning after voluntary withdrawal, in order of academic standing.
  - c. The length of time the student interrupts studies leading to the MD degree must not exceed two years in total.
- (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. (See §30.3.3 of the *GFC Policy Manual*).

#### (13) Medical Examination

Students admitted to the MD Program are required to present a certificate of satisfactory medical examination from a University of Alberta Health Centre physician. This requirement must be met before orientation.

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 (§87, *GFC Policy Manual*).

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 |

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

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 (\$30 of the *GFC Policy Manual*) describes a range of non-academic and academic offences deemed unacceptable and for which a student may be penalized. Additionally, the Faculty of Medicine and Dentistry has filed with the Campus Law Review Committee a list of offences representing gross professional misconduct (see \$30.3.3 of the *GFC Policy Manual*).

# 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, Reproductive Medicine and Urology, 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	★6	7 weeks	
DMED 513	★6	6 weeks	
DMED 514	★11	14 weeks	
DDS 509	★12	9 weeks	
DDS 510	★6	2-6s-0/week	
DDS 514	★2	0-0-60	
DDS 518	★4	54-0-6	
INT D 410	★3	0-32.5-0	
Year 2			
DDS 506	★5	6 weeks	
DDS 507	★9	11 weeks	
DDS 508	★2	2 weeks	
DDS 520	★6	2-6s-0/week	
DDS 522	★1	7 weeks	
DDS 523	★6	7 weeks	
DDS 529	★25	19 weeks	
DDS 532	★4	60-0-0	
DDS 533	★2	30-0-0	
Year 3			
DDS 541	★1	15-0-0	
DDS 545	★52	39 weeks	
DDS 547	★1	15-0-0	
DDS 549	★3	25-0-45	
DDS 555	★1	15-0-0	
Year 4			
DDS 565	★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 pre-clinical 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	★1	15-0-0	
DDS 545	★52	39 weeks	
DDS 547	★1	15-0-0	
DDS 549	★3	25-0-45	
DDS 555	★1	15-0-0	
Year 2			
DDS 565	★50	30 weeks	

# 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 positions of responsibility in private dental practice or community health care settings.

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  $\star$ 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.

# **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**

rear Z			
BIOCH 200	★3	39-0-0	
D HYG 201	★3	39-0-0	
D HYG 202	★1	14-0-2	
D HYG 211	★5.5	84-0-0	
D HYG 212	★6	0-0-180	
D HYG 213	★3	0-99c-3	
D HYG 215	★2	28-0-0	
D HYG 220	★3	28-0-26	
D HYG 230	★1.5	20-0-0	
D HYG 232	★1.5	14-21c-0	
D HYG 240	★2	28-0-9	
INT D 410	★3	0-32.5s-0	
MMI 133	★3	39-0-0	
OBIOL 202	★4	60-0-2	
PHYSL 210	★6	78-0-0	
Year 3			
D HYG 313	★16	0-471c-0	
D HYG 316	★2.5	28-12c-0	
D HYG 317	★3	45-0-0	
D HYG 321	★2	13-0-39	
D HYG 322	★2	28-0-0	
D HYG 326	★2.5	35-3s-0	
D HYG 329	★2.5	0-75c-0	
D HYG 340	★1	0-24c-0	
D HYG 345	★1	14-0-0	
D HYG 386	★2.5	15-0-45	
OBIOL 302	★3	45-0-0	
OBIOL 305	★3	42-0-0	
PMCOL 300	★2	28-0-0	

#### **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	r 4
rear	4

ICal 4			
ANTHR 393 or SOC 382	★3	39-0-0	-
D HYG 413	★7	20-150c-20	
D HYG 417	★3	39-0-0	
D HYG 420	★3	39-0-0	
(or equivalent health promo	otion course)		
D HYG 422	★3	39-0-0	
D HYG 440	★3	39-0-0	
REHAB 468	★3	39-0-0	
(or equivalent health resear	ch course)		
Two Options	★3	39-0-0	

(a minimum of one at the 300- or 400-level with the approval of Program Director) Only one PAC option course allowed.

#### 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:

completion program cons		unowing cou	11 969.
ANTHR 393 or SOC 382	★3		39-0-0
D HYG 417	★3		39-0-0
D HYG 420	★3		39-0-0
(or equivalent health prom	otion course	e)	
D HYG 440	★3		39-0-0
Two Options	★6		78-0-0
C			D' · · ·

(at the 300- or 400-level with the approval of Program Director)

#### Program B

256

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

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

The degree completion	n program	consists of the following courses:
ANTHR 393 or SOC 382	★3	39-0-0
D HYG 417	★3	39-0-0
D HYG 420	★3	39-0-0
(or equivalent health promotion	tion course)	
D HYG 422	★3	39-0-0
D HYG 440	★3	39-0-0

★3

156-0-0 Four options **★**12 (with the approval of the Program Director, two at the 300- or 400-level)

Program C

REHAB 468

(or equivalent health research course)

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

39-0-0

Graduates of the University of Alberta Dental Hygiene Program of 2002 and

forward will be require	ed to complete the fo	ollowing courses:
ANTHR 393 or SOC 38	32 <b>★</b> 3	39-0-0
D HYG 417	★3	39-0-0
D HYG 420	★3	39-0-0
(or equivalent health p	romotion course)	
D HYG 422	★3	39-0-0
D HYG 440	★3	39-0-0
REHAB 468	★3	39-0-0
(or equivalent health re	esearch course)	
SOC 210	★3	39-0-0
(or equivalent statistics	course)	
Three options	★9	117-0-0
(with approval of Prog	ram Director, two at t	the 300- or 400-level)

Bachelor of Science (Dental Hygiene Specialization) Post Diploma Degree Completion Program: University of Alberta, Dental Hygiene Diploma Graduates (Year 2008 and forward).

Graduates of the University of Alberta Dental Hygiene Program of 2008 and

(or equivalent health resea	rch course)	
SOC 210	★3	39-0-0
(or equivalent statistics cou	urse)	
hree options	★9	117-0-0
(with approval of Program	Director, two at t	he 300- or 400-level)
Program D		
Degree Completion P Diploma Graduates (Ye	rogram: Unive ar 2008 and fo	•
forward will be required to	o complete the fo	ollowing courses:
ANTHR 393 or SOC 382	★3	39-0-0
D HYG 417	★3	39-0-0
D HYG 420	★3	39-0-0
(or equivalent health prome	otion course)	
D HYG 422	★3	39-0-0
D HYG 440	★3	39-0-0
REHAB 468	★3	39-0-0
	reh course)	
(or equivalent health resea		
(or equivalent health resea Four options	★12	156-0-0

#### **MD Degree** 114.5

### 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 pre-clinical 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 516 (8 hours/week)
- (6) MED 517 (12 hours)
- (7) 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)	ANAES 546 (1 week)
(3)	F MED 546 (4 weeks)
<i>c</i>	

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

#### Year 4

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

(9) F MED 556 (3 weeks)

#### 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 term.

# **Program of Courses**

#### Phase I

(1) MLSCI 230 (★3)

- (2) MLSCI 235 (\*1)
- (3) MLSCI 240 (\*6)
- (4) MLSCI 250 (★3)
- (5) MLSCI 262 (\*3)
- (6) MLSCI 263 (★3)
- (7) MLSCI 270 (\*2)
- (8) PHYSL (★6)
- (9) Arts Option (★3)

Phase II – Clinical Rotation (See Note 1)

- (1) BIOCH 200 (★3)
- (2) BIOCH 330 (★3)
- (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, 460, 466, 475, 481, MMI 426 or 427 or 405 or 415
- (2) 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) **Notes**
- Notes
   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
- approved for this purpose by the Council of the Faculty of Medicine and Dentistry.
- (2)  $\star$ 3 in a Science option are required if a  $\star$ 3 project is attempted.  $\star$ 0 in a science option are required if a  $\star$ 6 project is attempted.

# 114.8 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  $\star$ 76 additional study post-diploma and  $\star$ 60 must be completed through the University of Alberta.

# **Program of Courses**

#### Year 1

(1) CHEM 101 (★3)
 (2) CHEM 102 (★3)

- (3) CHEM 164 or 261 (★3)
  - (4) CHEM 263 (★3)
    (5) BIOL 107 (★3)
  - (6) STAT 141 or 151 or 337 (★3)
  - (7) MLSCI 241 (★6)
  - (8) Approved MLS options (★6)
  - (9) MLSCI 320 (★3)

### Spring/Summer

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

#### Year 2

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

# 114.9 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  $\star 6$  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, B-117 Clinical Sciences Building.

# 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.

#### Provisions

- 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 practising physicians with the opportunity to remain up-to-date in knowledge, skills and attitudes. The Division organizes various postgraduate learning events for family practitioners and specialists. These include one- to three-day conferences in Edmonton or a resort area, regional conferences in outlying hospitals of central and northern Alberta, a telephone conference program to physicians in smaller communities, an evening course series, major university-based courses, clinical traineeships and distance learning programs, and a medical information service in the teaching hospitals of Edmonton. The Division cosponsors teaching events with various para-medical

organizations if they appear to relate to improvement of health care. The Division enjoys the support of the College of Family Physicians of Alberta, Alberta Health, and the Alberta Medical Association.

Inquiries about these programs should be directed to the Associate Dean, Continuous Professional Learning, 2J3 Walter C Mackenzie Health Sciences Centre, University of Alberta, Edmonton, AB T6G 2R7.

# 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 quality.

# 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 Diagnostic Radiology **Emergency Medicine** General Pathology General Surgery Haematological Pathology Internal Medicine Medical Microbiology Neurology (Adult and Paediatric) Neurosuraerv 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 Certificate of Special Competence Programs

Cardiology (Adult and Paediatric) Critical Care Medicine Endocrinology (Adult and Paediatric) Gastroenterology (Adult and Paediatric) Geriatric Medicine Haematology Infectious Diseases (Adult and Paediatric) Medical Oncology Nephrology (Adult and Paediatric) Occupational Medicine Paediatric Hematology/Oncology Respirology Rheumatology

### 114.14.3 Accreditation Without Certification Programs

Clinician Investigator Program Developmental Paediatrics Neonatal Perinatal Medicine Palliative Care Medicine Paediatric Emergency Medicine

Inquiries regarding these programs should be directed to the Associate Dean, Postgraduate Medical Education, 2-50 Medical Sciences Building, University of Alberta, Edmonton, AB T6G 2H7.

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 and Accreditation Without Certification Programs 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, #900, 10180-101 Street, Edmonton, AB T5J 4P8.

**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 underserved 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 Department of Dentistry in the General Practice Residency Clinic. 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.

# 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)