

Faculty of Pharmacy and Pharmaceutical Sciences

130 Members of the Faculty

130.1 Officers of the Faculty

Dean

RE Moskalyk, PhD

Associate Dean

LI Wiebe, PhD

130.2 Academic Staff

Professor and Dean

RE Moskalyk, PhD (Medicinal Chemistry)

Professor and Associate Dean, Graduate Studies and Research

LI Wiebe, PhD (Radiopharmaceutical Chemistry)

Professor and Associate Dean, Undergraduate Education

FM Pasutto, PhD (Medicinal Chemistry)

Professors Emeriti

LG Chatten, PhD

RT Coutts, PhD, DSc

MJ Huston, PhD

GE Myers, PhD

AA Noujaim, PhD

A Shysh, PhD

LG Stephens-Newsham, PhD

Professors

JA Bachynsky, PhD (Pharmacy Administration)

DF Biggs, PhD (Pharmacology)

F Jamali, PhD (Pharmacokinetics)

EE Knaus, PhD (Medicinal Chemistry)

JA Rogers, PhD (Pharmaceutics)

MR Suresh, PhD (Biomira Chair) (Immunoconjugates)

YK Tam, PhD (Pharmacokinetics)

Associate Professors

RT Foster, PhD (Pharmacokinetics)

S McQuarrie, PhD (Radiopharmacy/Bionucleonics)

Assistant Professors

KB Farris, PhD (Pharmacy Administration)

J Johnson, PhD (Pharmacoeconomics)

GS Kwon, PhD (Pharmaceutics)

BA Malcolm, PhD (Biotechnology)

J Mercer, PhD (Radiopharmaceutical Chemistry)

J Samuel, PhD (Biotechnology)

D Wishart, PhD (Bristol-Myers Squibb Chair) (Biotechnology)

Clinical Assistant Professors

M Ackman, PhD

T Birkness, PharmD

M Fradette, BSc

E Friesen, PharmD

S Heschuk, MSc

SL Kelcher, BSc

C Leson, PharmD

M Lindsay, PharmD

SL Mitchell, MPharm

N Rae, BSc

P Robertson, PhD

P Thomson, PharmD

R Tsuyuki, PhD

D Wright, MSc

N Yuksel, PharmD

H Yule, MPharm

Research Associate Professors

C Angelov, DSc (Noujaim Institute)

G Miller, PhD (Noujaim Institute)

Research Assistant Professors

J Diakur, PhD (Noujaim Institute)

B Leveugle, PhD (Noujaim Institute)

Faculty Service Officer

C Ediss, BSc (Bionucleonics)

Professional Officers

C Cox, BSP, MBA (Clinical Coordinator)

TW Kassian, BSc (Physical Plant)

A Ponting, PhD (Continuing Education)

Community Clerkship Coordinators

B Koshy, BSc

A Troszok, BSc

130.3 Associate Academic Staff

Adjunct Members

GR Boniface, PhD

C Chambers, BSc

M Daneshlab, PhD

J Duke, PhD

G Jones, PhD

AV Joshua, PhD

DF LeGatt, PhD

S Long, BSc

R Madiyalakan, PhD

RG Micetich, PhD

JR Scott, MSc

T Sykes, PhD

C Wilgosh, BSc, MBA

Honorary Members

GB Baker, PhD (Professor)

GG Griener (Assistant Professor)

EG Hunter, PhD (FSO)

AJ McEwan, MB (Assistant Clinical Professor)

AAC Yeung, MD (Associate Professor)

130.4 Additional Members of the Faculty Council

President and Vice Chancellor

R Fraser, PhD

Dean of the Faculty of Medicine and Oral Health Sciences

DL Tyrrell, MD

Professors

EG Hunter, PhD (Pharmacology)

KJ Hutchison, MD (Physiology)

H-J Liu, PhD (Chemistry)

M Michalak, PhD (Biochemistry)

MA Pickard, PhD (Microbiology)

Representatives

Alberta Pharmaceutical Association

Graduate Students' representative

Undergraduate representative

Registrar of the University

BJ Silzer, MEd

131 General Information

131.1 Opportunities in Pharmacy

Pharmacy is one of the oldest of the professions. It has progressed from the compounding and dispensing of drugs to essentially a "knowledge system" about drugs and drug products. Pharmacy practice has increasingly become oriented to the patient and accordingly requires the aspiring pharmacist to possess good communication skills and to be aware of and sensitive to the frequent need for compassion and understanding.

A variety of career options are open to the pharmacist upon graduation and licensure.

Community Practice

Community practice provides the "place of practice" for the majority of pharmacists. It can take one of many forms, namely, independently owned, a chain, a unit within a department store, or a part of a clinic. It can be large, providing a broad range of products and services, or small, dealing exclusively in medicines and related supplies. In whatever form, the practice environment of community pharmacy is one where the professional activities of the pharmacist involve direct contact with the client seeking either prescription medication or self-medication products or services. In balancing the commercial and professional aspects of community pharmacy, the pharmacist remains accountable in ensuring that the patient properly takes only those medicines which are essential for the maintenance of health, the prevention of disease, or the rational relief of pain.

Hospital Practice

Hospital pharmacists provide services in complex health care organizations. Traditionally, the pharmacist is responsible for the institutional

procurement, preparation, distribution, and control of pharmaceuticals. As a member of a health care team, the pharmacist is also responsible for patient-oriented services such as therapeutic consultations, drug information, and patient counselling and education. Some hospital pharmacists find careers by concentrating their practice in specific areas such as management, clinical services, and drug information. Others find rewarding careers as generalists in the country's many small to medium-sized institutions.

Pharmaceutical Industry

The pharmaceutical industry has essentially taken over the traditional compounding responsibilities on behalf of the practising pharmacist. By freeing the pharmacist from the time constraints of the compounding of medication, a redirection toward a patient-oriented pharmacy practice has been made possible.

The pharmacist who chooses the pharmaceutical industry as his practice environment identifies with one or more of the distinct parts of the compounding function: discovery or invention, formulation, ensuring safety, ensuring efficacy, or the actual manufacture of the drug. However, one may alternatively become involved with the marketing of the product. The usual way of entry into many companies is via the sales department which is, as well, the area of greatest opportunity for advancement. Opportunities in the other areas are often enhanced for graduates who proceed for postgraduate training in one of the pharmaceutical sciences.

Government Regulatory and Association Pharmacy Services

Career opportunities for pharmacists exist in federal and provincial government departments. These opportunities often relate to inspection and analyst functions in the regulatory sense. Each provincial licensing body is staffed by pharmacists involved in regulatory activities, as pharmacy is a self-governing profession.

Education and Research

Graduates may choose a university as their career environment. Training to the doctoral level is normal, although practising pharmacists in community, hospital, association, and the pharmaceutical industry contribute to specific educational programs.

Opportunities in research can be found in universities, government institutions and in private industry. Once again, training to the doctoral level is often essential.

Finally, many pharmacists have found greatly expanded career opportunities by adding a degree in law or business to their basic degree in pharmacy.

131.2 Qualifications for Practice in Alberta

The Bachelor of Science degree in Pharmacy of the University of Alberta is the minimum academic requirement accepted by the Alberta Pharmaceutical Association for a licence to practise pharmacy in the Province of Alberta.

In order to register as a pharmacist in Alberta a graduate must also have successfully completed an internship program sponsored and operated by the Alberta Pharmaceutical Association and the qualifying examination administered by the Pharmacy Examining Board of Canada. Information concerning the regulations applying to practical experience in Alberta may be obtained from the Registrar-Treasurer, Alberta Pharmaceutical Association, 7th Floor, 10130 - 112 Street, Edmonton, Alberta, T5K 2K4. Information concerning the Qualifying Examination may be obtained from the Registrar, Pharmacy Examining Board of Canada, Suite 603, 123 Edward Street, Toronto, Ontario, M5G 1E2.

The regulations governing the practice of pharmacy in the Province of Alberta are set forth in the Alberta Pharmaceutical Profession Act.

131.3 Faculty Accreditation

The Bachelor of Science in Pharmacy program of the Faculty of Pharmacy and Pharmaceutical Sciences of the University of Alberta has been granted Full Accreditation Status by the Canadian Council for Accreditation of Pharmacy Programs for a five-year term, 1996–2001.

132 Faculty Regulations

132.1 Admission

General admission requirements to the University are set out in §§13 and 14. Specific admission information for the Bachelor of Science in Pharmacy is set out in §15.12.

132.2 Academic Standing

Academic Performance is normally measured by Grade Point Average (GPA) attained during a winter session. In this determination, grades of W are ignored throughout, whereas grades of WF are considered to be grades of 1.0. Grades of courses completed during Intersession or grades in courses accepted for transfer credit are not included in the calculation of the GPA for measuring academic performance.

Determination of each student's academic performance will normally occur after the end of the regular academic year, on the basis of the work attempted during that year.

Promotion of the student from year to year is contingent upon satisfactory academic performance.

Progression in the program shall be year by year and not by courses completed. Accordingly, all students in a particular year of the program should be registered in the same five courses in each term. Students will not be permitted to register in any required courses from a particular year of the program until they have satisfactorily completed all of the required courses from the previous year of the program.

The GPA, as determined above, places the student in one of the following categories of academic performance:

Satisfactory performance is defined as that which yields a Grade Point Average of 5.0 or greater provided that no course is failed.

Conditional performance is defined as that which yields a Grade Point Average of 5.0 or greater but includes one or more failed courses.

Probationary performance is defined as that which yields a Grade Point Average of less than 5.0, but not less than 4.5, with or without failed courses.

Unsatisfactory performance is defined as that which yields a Grade Point Average of less than 4.5 or less than 5.0 for students in a probationary year.

Promotion to the next year of the program requires the achievement of satisfactory performance. Promotion will be awarded to conditional performance students only after they have achieved a passing grade in the failed course or courses.

Probationary year. A repeat of the year in question is required of all probationary performance students. During this probationary year the student must repeat all core courses in which he or she achieved a grade of less than 5. Additional approved courses may be included to make up a normal course load, entirely at the discretion of the student. To clear probation and qualify for promotion, a student must pass all of the courses he or she was required to repeat and attain a GPA of at least 5.0 in these required courses.

Required to withdraw. Students who achieve unsatisfactory performance or fail to clear probation will be required to withdraw from the program.

Reexamination. See §23.5.5.

First Class Standing is awarded to students who achieve a Grade Point Average of at least 7.5 during a winter session, provided they have taken ★30 in that session.

The notation "With Distinction" is inscribed on the permanent record and graduate parchment if the candidate has obtained a Grade Point Average of 7.5 or higher in all courses in the last two years of the program.

Appeals and Grievances: Decisions on academic standing are made by the Council of the Faculty. Appeals may be made to the Academic Appeals Committee. Enquiries concerning standing in individual courses should be made to the professor in charge of the course. If the issue is still not resolved the student may report the matter to the Associate Dean for enquiry. See §23.8 (Appeals and Grievances) of this Calendar for further information.

The Faculty's regulations governing academic appeals and grade appeals may be obtained in the Dean's Office.

133 Programs of Study

133.1 The Degree of BSc in Pharmacy

133.1.1 General Information

The first degree program in pharmacy is four years in length.

The courses to be taken in the first three years of the program are fixed and are considered basic to the training of all pharmacists. The fourth year has two required courses to round out the core program. The remainder of the fourth year course load allows for some degree of specialization.

133.1.2 Program of Courses

	Term 1 hours	Term 2 hours
Year 1		
ANAT 200 (Human Morphology)	3-0-0	—
BIOCH 203 (Introductory Biochemistry I)	3-0-0	—
BIOCH 205 (Introductory Biochemistry II)	—	3-0-0
PHARM 302 (Introduction to the Profession of Pharmacy)	3-4s-0	—
PHARM 303 (Pharmacy Dispensing Procedures and Pharmaceutical Calculations)	—	3-0-3
PHARM 320 (Introduction to Medicinal Chemistry)	3-0-0	3-0-0
PHARM 325 (Introduction to Quantitative Pharmaceutical Analysis)	—	3-0-3
PHYSL 252 (Human Physiology)	3-0-0	3-0-0
	15-4s-0	15-0-6
Year 2		
PMCOL 331 (Pharmacology)	3-0-0	3-0-0
PHARM 340 (Pharmacy Administration)	—	3-2s-0
PHARM 352 (Jurisprudence and Ethics)	3-1s-3	—
PHARM 360 (Pharmaceutics)	3-0-3	3-0-3
PHARM 370 (Medicinal Chemistry)	3-0-0	3-0-0
PHARM 380 (Introduction to Disease Processes)	3-0-0	—
Option*	—	3-0-0
	15-1s-6	15-2s-3
Year 3		
PHARM 403 (Toxicity of Drugs and Related Products)	3-3s-0	—
PHARM 404 (Clinical Pharmacy)	—	3-0-0
PHARM 405 (Introduction to Institutional Practice and Patient Counselling with the Emphasis on Non-Prescription Drugs)	3-1s-3	—
PHARM 406 (Monitoring Drug Therapy Based on Patient Interviews, Patient Counselling and Drug Information)	—	3-1s-3
PHARM 415 (Biopharmaceutics and Pharmacokinetics)	3-0-0	—
PHARM 431 (Therapeutics)	3-0-0	3-0-0
PHARM 432 (Antimicrobial Agents and Infectious Diseases)	—	3-2s-0
PHARM 443 (Radiopharmacy I)	—	3-0-0
Option*	3-0-0	—
	15-4s-3	15-3s-3
Year 4		
(Students will be off campus in either the first or second term. Course work will be completed in the opposite term.)		
PHARM 456 (Clinical Pharmacy Rotations)	12 weeks	or 12 weeks
PHARM 457 (Contemporary Issues in Pharmacy)	1-0-0	or 1-0-0
Specialization Elective**	3-0-0	or 3-0-0
Specialization Elective**	3-0-0	or 3-0-0
Specialization Elective**	3-0-0	or 3-0-0
Option*	3-0-0	or 3-0-0
Option*	3-0-0	or 3-0-0
	16-0-0	16-0-0

***Options**

Options normally shall be selected from courses offered outside of the Faculty of Pharmacy and Pharmaceutical Sciences. These courses allow students to pursue areas of personal interest and promote a liberal education. Students wishing to further develop their intended pattern of specialization may wish to select options from the list of pattern-related options provided by the Faculty of Pharmacy and Pharmaceutical Sciences.

Note: Only one junior course from each subject area is permitted. Junior courses are those numbered 199 or lower.

**Specialization electives are available as follows:

- (1) **Term 1:** PHARM 458, 460, 461, 489, 494, 498, 561, 570, 575, 593.
- (2) **Term 2:** PHARM 481, 483, 484, 489, 493, 498, 565, 586.

It may be necessary to limit enrolment in certain specialization electives.

133.2 Graduate Study

Students may undertake graduate study in pharmacy leading to the degree of MPharm, MSc, or PhD. Any students contemplating such work should discuss their program with the Associate Dean of the Faculty of Pharmacy and Pharmaceutical Sciences. They should also familiarize themselves with the admission requirements, regulations, and procedures laid down by the Faculty of Graduate Studies and Research. These may be found in §184, Graduate Programs.

134 Courses

Faculty of Pharmacy and Pharmaceutical Sciences courses can be found in §211, Course Listings, under the following subject headings:
Pharmacy (PHARM)