



# SCHOOL OF PHARMACY

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[www.mun.ca/pharmacy](http://www.mun.ca/pharmacy)

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#### Special Advisor, Practice Innovation

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#### Senior Administrative Officer

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#### Drug Information Pharmacist

Donnan, J., B.Sc.(Pharm.), M.B.A. *Memorial*, M.Sc. *Toronto*; ACPR, CE

#### Adjunct Professors

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 MacDonald, D., B.Sc., M.Sc., Ph.D. *Memorial*  
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 O'Reilly, D., B.Sc. *Acadia*, Ph.D. *Memorial*

#### Clinical Assistant Professors

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 Parmiter, K., B.Sc.(Pharm.) *Memorial*, Pharm.D. *University of Colorado Health Sciences Center*  
 Thomas, B., Pharm.D. *Colorado*  
 Welsh, M., B.Sc.(Pharm.) *Memorial*, Pharm.D. *University of Washington*

#### Cross Appointment

Randell, E.W., Ph.D. *Memorial*, DCC, FCACB *Toronto*; Cross appointment from Faculty of Medicine

#### Lecturer

Pevida, A., B.N., R.N., M.Sc.(Med.) *Memorial*

#### Structured Practice Experience Program Co-ordinator

Spurrell, W., B.Sc.(Pharm.) *Memorial*

#### Laboratory Instructor

Ryan, P., B.Sc., M.Sc.(Med.) *Memorial*

#### Pharmacy Skills Laboratory Instructor

Arnold, K., B.Sc.(Pharm.) *Memorial*

## 1 The Memorial University of Newfoundland Code

The attention of all members of the University community is drawn to the section of the University Calendar titled **The Memorial University of Newfoundland Code**, which articulates the University's commitment to maintaining the highest standards of academic integrity.

## 2 Student Code of Conduct

Memorial University of Newfoundland expects that students will conduct themselves in compliance with University Regulations and Policies, Departmental Policies, and Federal, Provincial and Municipal laws, as well as codes of ethics that govern students who are members of regulated professions. The *Student Code of Conduct* outlines the behaviors which the University considers to be non-academic misconduct offences, and the range of remedies and/or penalties which may be imposed. Academic misconduct is outlined in **UNIVERSITY REGULATIONS - Academic Misconduct** in the University Calendar.

For more information about the *Student Code of Conduct*, see [www.mun.ca/student/sscm/conduct/](http://www.mun.ca/student/sscm/conduct/).

### 2.1 Pharmacy Students

In addition to the *Student Code of Conduct* above, students in Pharmacy programs are also required to adhere to the Newfoundland and Labrador Pharmacy Board Code of Ethics, the Code of Professional Conduct for Pharmacy Students, and the School of Pharmacy Pledge of Professionalism as outlined at [www.mun.ca/pharmacy/](http://www.mun.ca/pharmacy/).

### 3 School Description

The School of Pharmacy is committed to providing programs of quality and excellence that will prepare individuals to contribute significantly in pharmacy practice settings. The experiential learning component of the programs ensures students have the opportunity to integrate academic learning with professional practice and to develop the necessary knowledge, skills and attitudes required of practicing pharmacists. The School encourages a close working relationship among students, faculty, and staff, and prides itself on its strong association with and support of the pharmacy community at both the provincial and national level.

Information regarding the School of Pharmacy (undergraduate and graduate programs) is available at [www.mun.ca/pharmacy](http://www.mun.ca/pharmacy). For additional information on graduate programs see **School of Graduate Studies**.

Students must meet all regulations of the School in addition to those stated in the general regulations. For information concerning fees and charges, admission/readmission to the University, and general academic regulations (undergraduate), refer to **UNIVERSITY REGULATIONS**.

#### 3.1 Vision Statement

To be a distinguished and innovative experienced-based pharmacy education program that fosters excellence in practice, professionalism, scholarship, and research to improve our citizens' health and well-being.

#### 3.2 Mission Statement

The School of Pharmacy:

Cultivates programs of distinction in pharmacy education and research, engages the broader community and offers innovative programs that are destinations of choice for undergraduate and graduate students, employers and funding agencies, and provides leadership in pharmacy practice and research.

#### 3.3 Accreditation Status

The School of Pharmacy is accredited by the Canadian Council for Accreditation of Pharmacy Programs (CCAPP) to 2017.

## 4 Description of Programs

Students previously admitted to the former Bachelor of Science (Pharmacy) program, and in good standing, must complete all program requirements by 2021. Students currently completing the requirements for this program must follow the Calendar regulations for the Academic year in which they were admitted to the program. Memorial University of Newfoundland Calendars by Academic year can be viewed at [www.mun.ca/regoff/calendar.php](http://www.mun.ca/regoff/calendar.php).

### 4.1 Doctor of Pharmacy (Pharm.D.)

The School of Pharmacy offers two program options leading to the undergraduate Doctor of Pharmacy (Pharm.D.) degree program, the full-time, entry-to-practice program and the part-time program for working professionals.

#### 4.1.1 Doctor of Pharmacy (Pharm.D.), Full-Time Program

The full-time, entry-to-practice Doctor of Pharmacy (Pharm.D.) program prepares students to graduate as medication therapy experts, prepared to embrace the full scope of pharmacy practice. Students are required to complete 30 credit hours of specific prerequisite courses prior to entry into the program, followed by five years of study in the pharmacy program. The program is student-focused, comprehensive, and experience-based. The curriculum provides students with the scientific knowledge and clinical skills necessary to enter professional practice. Instructional methods emphasize critical thinking, problem-solving, communication, professionalism, and ethical behaviours. During the program, students will develop an understanding of the professional and societal responsibilities of a pharmacist, and will recognize the need for lifelong learning. The extensive Pharmacy Practice Experience component prepares students for a variety of professional settings. The aim is to graduate students who are scientific inquirers, interprofessional collaborators, independent decision makers, and leaders who have the ability to adapt their practice to fulfil their evolving professional roles. Pharm.D. graduates will be prepared to practice independently in a variety of pharmacy settings including community pharmacy, hospital pharmacy, pharmaceutical industry, pharmacy organizations, research, government, and academia.

All courses in the School of Pharmacy are designated by the abbreviation PHAR.

##### 4.1.1.1 Registration as a Pharmacy Student

A student must register annually with the Newfoundland and Labrador licensing body as a "Pharmacy Student" by September 30th. As part of the registration process, students must provide a current certificate of conduct (criminal record check). Further information may be obtained at [www.nlpb.ca](http://www.nlpb.ca). Additionally, prior to the commencement of a Pharmacy Practice Experience in another Canadian jurisdiction, a student must register with the respective provincial or territorial licensing body. Further requirements may exist for international Pharmacy Practice Experience. A student who fails to meet the registration requirements will be required to withdraw from the program.

##### 4.1.1.2 Pharmacy Practice Experience (PPE)

Through Pharmacy Practice Experiences, the program aims to prepare students for exemplary pharmacy practice. Students are expected to display appropriate communication, professionalism, and teamwork, and demonstrate increased independence and critical reasoning as they progress in the program. PPEs consist of early and intermediate experiences as well as advanced pharmacy practice experiences (APPE). PPEs expose students to situations which cannot be provided in the classroom.

1. The School of Pharmacy is responsible for providing overall direction for practice experiences and will oversee the placement of students at sites. Students may be assigned to any participating site within the Province of Newfoundland and Labrador; a request to complete a PPE outside the province may be considered.
2. Students are responsible for all travel and accommodation costs associated with the PPE.
3. Students are required to provide evidence of a valid Standard First Aid Level C certificate for all PPEs. Evidence of recertification must be submitted no later than one month before the expiry date of the certification.
4. Students must comply with the policies of the site to which they are assigned. Sites may have requirements for immunization, testing or documentation beyond those required by the School. Students are required to complete these requirements in a timely fashion and at their own expense. Students unable to meet these site requirements may be delayed in their program or prevented from

completing their program of study.

#### 4.1.1.3 Pharmacy Practice Experience Evaluation

1. Evaluation of the student's performance is conducted by the preceptor responsible for supervising the student during the PPE. Preceptors determine the competency level of the student for each of the outcomes.
2. The School determines the grade of each PPE, based upon the evaluation provided by the preceptor. Students will be graded as PAS (pass) or FAL (fail).
3. Students who conduct themselves in such a manner as to be terminated from the PPE site will be assigned a grade of FAL (fail) for that PPE and may be required to withdraw from the program.

#### 4.1.2 Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program

The Doctor of Pharmacy (Pharm.D.) for Working Professionals program will be available for admission for Fall 2018.

The Doctor of Pharmacy (Pharm.D.) for Working Professionals is a part-time undergraduate program designed for practicing pharmacists who wish to remain employed while pursuing the degree of Doctor of Pharmacy. A cohort-based learning environment offers an effective blend of theory and practice. The program is comprised of 15 courses totalling 55 credit hours and can be completed either as a three- or a four-year option. The program supports a patient-centered course of study and will be delivered through a combination of online courses, on-campus clinical skills workshops, and experiential learning.

All courses in the School of Pharmacy are designated by the abbreviation PHAR.

##### 4.1.2.1 Registration as a Pharmacist

A student must be licensed as a "Pharmacist" through the student's pharmacy licensing body in the province, territory, or country in which they reside. Applicants will be asked to submit proof of licensure with the application for admission to the School and must maintain licensure throughout the program. Additionally, prior to the commencement of an Advanced Pharmacy Practice Experience in another jurisdiction, a student must register with the respective licensing body. Further requirements may exist for international Advanced Pharmacy Practice Experiences. A student who fails to meet the registration requirements will be required to withdraw from the program.

##### 4.1.2.2 Advanced Pharmacy Practice Experience (APPE)

1. The Pharm.D. for Working Professionals requires the completion of two Advanced Pharmacy Practice Experiences (APPE) in the final year of the program. Students may request to complete both APPE courses in either Winter semester or Spring semester of the final year of the program.
2. The School of Pharmacy provides overall direction for practice experiences and will oversee the placement of students at practice sites. Students are responsible for all travel and accommodation costs associated with APPEs.
3. For all APPEs, students are required to provide evidence of a valid Standard First Aid Level C certificate. Evidence of recertification must be submitted no later than one month before the expiry date of the certification.
4. Students are required to provide evidence of authorization to administer drugs by injection prior to the first APPE.
5. Students must comply with the policies of the site to which they are assigned. Sites may have requirements for immunization, testing or documentation beyond those required by the School. Students are required to complete these requirements in a timely fashion and at their own expense. Students unable to meet these site requirements may be delayed in their program or prevented from completing their program of study.

##### 4.1.2.3 Advanced Pharmacy Practice Experience Evaluation

1. Evaluation of the student's performance is conducted by the preceptor responsible for supervising the student during the APPE. Preceptors determine the competency level of the student for each of the outcomes.
2. The School determines the grade of each APPE, based upon the evaluation provided by the preceptor. Students will be graded as PAS (pass) or FAL (fail).
3. Students who conduct themselves in such a manner (such as violation of the Student Code of Conduct) as to be terminated from an APPE site will be assigned a grade of FAL (fail) for that APPE and may be required to withdraw from the program.

## 5 Admission Regulations for the School of Pharmacy

In addition to meeting the **UNIVERSITY REGULATIONS** students applying for admission to programs offered by the School of Pharmacy must meet the appropriate admission regulations of the School.

### 5.1 Doctor of Pharmacy (Pharm.D.), Full-Time Program

#### 5.1.1 General Information

1. Admission will be to the first year of the full-time, entry-to-practice Doctor of Pharmacy program in the Fall term.
2. Entry to the School is competitive for a limited number of seats. Priority is given to applicants who are residents of Newfoundland and Labrador. The final decision on admission is determined by the Committee on Undergraduate Student Admissions of the School of Pharmacy.
3. As part of the regular quota, one seat per year is available in the program for bona fide residents of Newfoundland and Labrador First Nations or Aboriginal ancestry who have met the minimum numeric grade and course requirements for admission to the program.
4. The Committee on Undergraduate Student Admissions of the School of Pharmacy considers each applicant's academic background and information on the applicant's personal characteristics and achievements as given by the applicant. Normally, personal interviews (which may include both a written and oral component) will be required. Reports from referees may also be considered.
5. The School of Pharmacy does not require certificates of conduct (criminal record checks), or other screening procedures as a condition of admission to its program. However, applicants should be aware that a certificate of conduct will be required as part of the registration process with the Newfoundland and Labrador pharmacy licensing body. In addition, applicants should be aware such certificates of conduct or other screening procedures may be required by practice experience sites used by the University for academic course assignments necessary for graduation. Such sites may refuse to accept students on the basis of information contained in the record check or other screening procedure thus preventing the students from completing a practice experience or

other clinical requirement. As a result, such students may not be eligible for promotion or graduation. It is the students' responsibility to have such checks and screening procedures completed as required and at their own expense. The screening procedures of any given site may change from time to time and are beyond the control of the University.

### 5.1.2 Application Forms and Deadlines

1. The application for admission or readmission to programs offered by the School of Pharmacy is submitted online; current and returning Memorial University of Newfoundland applicants should apply using the Admissions menu within Memorial Self-Service at [www5.mun.ca/admit/twbkwbis.P\\_WWWLogin](http://www5.mun.ca/admit/twbkwbis.P_WWWLogin). Applicants who are new to Memorial University of Newfoundland should follow the application instructions at [www.mun.ca/undergrad/apply](http://www.mun.ca/undergrad/apply). The deadline date for submission of applications is February 1st for Fall admission.
2. All supporting documentation and fees for admission to the program must be received on or before the deadline of February 1st in any year.
3. Incomplete applications and applications received after the deadline will not be considered.

### 5.1.3 Admission Requirements

Applicants who are not currently students at Memorial University of Newfoundland must apply for admission to the University under the **Categories of Applicants, Admission Criteria and Other Information** outlined under **UNIVERSITY REGULATIONS - Admission/Readmission to the University (Undergraduate)**. In addition to meeting these regulations, applicants to the School must meet requirements as indicated below.

1. To be considered for admission, an applicant must have completed the 30 credit hours outlined below by the end of the Winter term for the year in which admission is being sought. These courses and credits must have been taken at Memorial University of Newfoundland or accepted for transfer credit from an academic institution. The 30 credit hours are:
  - Biology 1001 and 1002
  - Chemistry 1050 and 1051
  - 6 credit hours in English (a Critical Reading and Writing (CRW) course is recommended)
  - Mathematics 1000 and 1001
  - Physics 1020 or 1050, and Physics 1021 or 1051
2. For students attending Grenfell Campus, the following course offerings are acceptable for admission to the School;
  - Biology 1001 and 1002
  - Chemistry 1200 and 1001
  - 6 credit hours in English (a Critical Reading and Writing (CRW) course is recommended)
  - Mathematics 1000 and 1001
  - Physics 1020 or 1050, and Physics 1021 or 1051
3. Normally an application will not be considered from an applicant who cannot produce evidence that the above requirements have been met or will have been met by end of the Winter term of the year in which admission is being sought.
4. An unsuccessful applicant who wishes to reapply for admission is required to submit the application forms relevant to the year of reapplication and will be required to enter into the competition for that year.

### 5.1.4 Acceptance Procedures

1. The decision of the Committee on Undergraduate Student Admissions of the School of Pharmacy will be sent electronically to applicants by the Dean of the School. No other form of notification will be considered official.
2. Applicants shall have 10 calendar days from the date of offer of admission in which to confirm acceptance. The signed intention to accept the offer must be accompanied by a deposit of \$500, which will be credited towards tuition fees. The deposit will be forfeited if the applicant subsequently declines the offer or fails to register in the Pharmacy program for the Fall term.
3. If the acceptance form and deposit is not received within 10 calendar days, the offer by the School will be withdrawn, and the applicant will be notified.
4. Students who fail to register for courses for the Fall term of admission will be considered withdrawn from the program. Such applicants, if they wish to be considered for admission in the future, must submit a new application for admission to the program.

Applicants requiring additional information may refer to the School of Pharmacy website at [www.mun.ca/pharmacy/](http://www.mun.ca/pharmacy/).

## 5.2 Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program

The Doctor of Pharmacy (Pharm.D.) for Working Professionals will be available for admission for Fall 2018.

### 5.2.1 General Information

1. Admission will be to the first year of the Doctor of Pharmacy (Pharm.D.) for Working Professionals in the Fall term.
2. Entry to the program is competitive for a limited number of seats. Priority is given to applicants who are residents of Newfoundland and Labrador or who graduated from Memorial University of Newfoundland's School of Pharmacy. The final decision on admission is determined by the Committee on Undergraduate Student Admissions of the School of Pharmacy.
3. The Committee on Undergraduate Student Admissions of the School of Pharmacy considers each applicant's professional background and information on the applicant's personal characteristics and achievements as given by the applicant.
4. The School of Pharmacy does not require certificates of conduct (criminal record checks) or other screening procedures as a condition of admission to its program. However, applicants should be aware such certificates of conduct or other screening procedures may be required by practice experience sites used by the University for academic course assignments necessary for graduation. Such sites may refuse to accept students on the basis of information contained in the record check or other screening procedure thus preventing the students from completing a practice experience or other clinical requirement. As a result, such students may not be eligible for promotion or graduation. It is the students' responsibility to have such checks and screening procedures completed as required and at their own expense. The screening procedures of any given site may change from time to time and are beyond the control of the University.

## 5.2.2 Application Forms and Deadlines

1. The application for admission or readmission to programs offered by the School of Pharmacy is submitted online; current and returning Memorial University of Newfoundland applicants should apply using the Admissions menu within Memorial Self-Service at [www5.mun.ca/admit/twbkwbis.P\\_WWWLogin](http://www5.mun.ca/admit/twbkwbis.P_WWWLogin). Applicants who are new to Memorial University of Newfoundland should follow the application instructions at [www.mun.ca/undergrad/apply](http://www.mun.ca/undergrad/apply). The deadline date for submission of applications is February 1st for Fall admission.
2. All supporting documentation and fees for admission to the program must be received on or before the deadline of February 1st in any year.
3. Incomplete applications and applications received after the deadline will not be considered.

## 5.2.3 Admission Requirements

Applicants who are not currently students at Memorial University of Newfoundland must apply for admission to the University under the **Categories of Applicants, Admission Criteria and Other Information** outlined under **UNIVERSITY REGULATIONS - Admission/Readmission to the University (Undergraduate)**. In addition to meeting these regulations, applicants to the School must meet requirements as indicated below.

To be considered for admission, an applicant:

1. must be a licensed pharmacist in good standing with the licensing body; and
2. must have graduated with a Bachelor's degree from an accredited Canadian Pharmacy program or the former pharmacist diploma program from the Newfoundland and Labrador College of Trades and Technology; and/or have successfully completed the Pharmacy Examining Board of Canada (PEBC) Qualifying Exam.

An unsuccessful applicant who wishes to reapply for admission is required to submit the application forms relevant to the year of reapplication and will be required to enter the competition for that year.

## 5.2.4 Acceptance Procedures

1. The decision of the Committee on Undergraduate Student Admissions of the School of Pharmacy will be sent electronically to applicants by the Dean of the School. No other form of notification will be considered official.
2. Applicants shall have 10 calendar days from the date of offer of admission in which to confirm acceptance. The signed intention to accept the offer must be accompanied by a deposit of \$1,000, which will be credited towards tuition fees. The deposit will be forfeited if the applicant subsequently declines the offer or fails to register in the Pharmacy program for the Fall term.
3. If the acceptance form and deposit is not received within 10 calendar days, the offer by the School will be withdrawn, and the applicant will be notified.
4. Students who fail to register for courses for the Fall term as set out in **Table 2 Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program** will be considered withdrawn from the program. Such applicants, if they wish to be considered for admission in the future, must submit a new application for admission to the program.

## 6 Program Regulations

### 6.1 Doctor of Pharmacy (Pharm.D.), Full-Time Program

- The 224 credit hour full-time, entry-to-practice Doctor of Pharmacy (Pharm.D.) program requires 30 credit hours before admission and 194 credit hours after admission to the program.
- The program courses normally shall be taken in the Academic Terms in the sequence and course load as set out in **Table 1 Doctor of Pharmacy (Pharm.D.), Full-Time Program**.

**Table 1 Doctor of Pharmacy (Pharm.D.), Full-Time Program**

Term	Required Courses
Courses required for admission as indicated under <b>Admission Requirements, Doctor of Pharmacy (Pharm.D.), Full-Time Program.</b>	Biology 1001 and 1002 Chemistry 1050 and 1051 (St. John's Campus) or Chemistry 1200 and 1001 (Grenfell Campus) 6 credit hours in English (an English Critical Reading and Writing course is recommended) Mathematics 1000 and 1001 Physics 1020 or 1050 and Physics 1021 or 1051
Fall Year 1, Academic Term 1	Chemistry 2400 PHAR 2002 PHAR 2010 (may be completed in Fall, Winter or Spring) PHAR 2201 PHAR 2250 PHAR 2610
Winter Year 1, Academic Term 2	Chemistry 2401 PHAR 2003 PHAR 2004 PHAR 2010 (if not previously completed) PHAR 2202 PHAR 2251 PHAR 2620
Spring Year 1, Academic Term 3	PHAR 2010 (if not previously completed)
Fall Year 2, Academic Term 4	PHAR 3111 PHAR 3250 PHAR 3270 PHAR 3801 PHAR 3805
Winter Year 2, Academic Term 5	PHAR 3006 PHAR 3251 PHAR 3271 PHAR 3410 PHAR 3810 PHAR 3825
Spring Year 2, Academic Term 6	PHAR 305P
Fall Year 3, Academic Term 7	PHAR 4250 PHAR 4270 PHAR 4620 PHAR 4802 PHAR 4810 Statistics 2550
Winter Year 3, Academic Term 8	PHAR 4251 PHAR 4271 PHAR 4420 PHAR 4820 PHAR 4860
Spring Year 3, Academic Term 9	PHAR 406P PHAR 407P
Fall Year 4, Academic Term 10	PHAR 5250 PHAR 5270 PHAR 5430 PHAR 5815 PHAR 5830
Winter Year 4, Academic Term 11	PHAR 508P PHAR 5251 PHAR 5271 PHAR 5275 PHAR 5640
Year 5, Advanced Pharmacy Practice Experience	PHAR 605P PHAR 606P PHAR 607P PHAR 608P

## 6.2 Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program

- The 55 credit hour part-time, Doctor of Pharmacy (Pharm.D.) for Working Professionals program is available to be completed either as a three- or a four-year option. Normally, a student must complete the degree requirements either in three- or a four-years from the time of initial admission. Courses normally shall be taken in the Academic terms in the sequence and course load as set out in **Table 2 Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program**.
- PHAR 5901-5905 may be offered on a rotating basis and may not be offered in the order shown below.
- A student may request to complete both APPE courses (PHAR 610P, PHAR 611P) in either the Winter or Spring semester of the final year of the program.

**Table 2 Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program**

Term	Three Year Option - Required Courses	Four Year Option - Required Courses
Fall Year 1, Academic Term 1	PHAR 4900 PHAR 4901 PHAR 4902	PHAR 4900 PHAR 4901 PHAR 4902
Winter Year 1, Academic Term 2	PHAR 4903 PHAR 4910	PHAR 4903
Spring Year 1, Academic Term 3	PHAR 5901	
Fall Year 2, Academic Term 4	PHAR 5902 PHAR 5920	PHAR 5902
Winter Year 2, Academic Term 5	PHAR 5903 PHAR 5904	PHAR 4910
Spring Year 2, Academic Term 6	PHAR 6900 PHAR 6930	PHAR 5901
Fall Year 3, Academic Term 7	PHAR 5905	PHAR 5920
Winter Year 3, Academic Term 8	PHAR 610P	PHAR 5903 PHAR 5904
Spring Year 3, Academic Term 9	PHAR 611P	PHAR 6900 PHAR 6930
Fall Year 4, Academic Term 10		PHAR 5905
Winter Year 4, Academic Term 11		PHAR 610P
Spring Year 4, Academic Term 12		PHAR 611P

## 7 Promotion Regulations

### 7.1 Doctor of Pharmacy (Pharm.D.), Full-Time Program

#### 7.1.1 General Information

- The Committee on Undergraduate Studies of the School of Pharmacy will determine each student's promotion status at the end of each Academic year.
- In addition to meeting the promotion regulations for the School, students must meet the general academic regulations (undergraduate). For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**.
- Success in the program depends on meeting the requirements of all terms.

#### 7.1.2 Promotion Status

A student's promotion status at the end of each Academic year will be in one of the following two categories:

##### 7.1.2.1 Clear Promotion

Clear Promotion means a student can proceed to the next Academic year. Clear Promotion will be granted when the following criteria are met.

- A student must have completed the Academic year with a weighted average of at least 65% and at least a pass (numeric grade of at least 50% or PAS) in each course. A weighted average will be based on credit hours in the program of study as outlined in **Table 1 Doctor of Pharmacy (Pharm.D.), Full-Time Program**.
- A student completing PHAR 2010 must obtain a grade of PAS (pass).
- A student completing a PPE course (PHAR 305P, 406P, 407P, 508P) must obtain a grade of PAS (pass) in each course.
- A student must maintain professional and ethical behaviour consistent with the *Student Code of Conduct* as outlined at: [www.mun.ca/pharmacy](http://www.mun.ca/pharmacy).

##### 7.1.2.2 Promotion Denied

Promotion Denied means Clear Promotion is not achieved at the end of the Academic year. Promotion Denied will be granted when any of the following criteria are met:

- A student has obtained less than a 65% weighted average in the Academic year. A weighted average will be based on credit hours in the program of study as outlined in **Table 1 Doctor of Pharmacy (Pharm.D.), Full-Time Program**.
- A student has obtained less than 50% in any course or who has received a grade of FAL (fail) in any course within the Academic

year.

3. A student completing a PPE course (PHAR 305P, 406P, 407P, or 508P) has obtained a grade of FAL (fail).
4. A student has failed to obtain **Clear Promotion** at the end of each Academic year.
5. A student has not maintained the professional and ethical behaviour consistent with the **Student Code of Conduct**.

Notwithstanding the above, the School of Pharmacy may offer the student the option to repeat an Academic year on the grounds of academic difficulties. This may be offered only once during the student's program. This restriction may be waived if it has been demonstrated that the student's academic performance has been adversely affected by factors duly authenticated and acceptable to the Committee on Undergraduate Studies of the School of Pharmacy.

### 7.1.2.3 Other Information

To be recommended for graduation, a student must have **Clear Promotion** at the end of Academic year 4, and must have successfully completed all four Advanced Pharmacy Practice Experience (APPE) courses during Academic year 5. The following criteria will be used to assess the APPE courses:

1. A student must demonstrate consistent professional and ethical behaviour that meets the criteria of Student Conduct as outlined at [www.mun.ca/pharmacy](http://www.mun.ca/pharmacy).
2. A student is required to obtain a grade of PAS (pass) in all four APPE courses (PHAR 605P, 606P, 607P, 608P).
3. Normally, if a student fails an APPE course, the Committee on Undergraduate Studies of the School of Pharmacy may permit the student to continue to the students next scheduled APPE course and require the student to repeat the failed course at a later date. This may extend the duration of the student's program.
4. In certain circumstances, such as violation of student conduct as outlined at [www.mun.ca/pharmacy](http://www.mun.ca/pharmacy) or failure of an APPE course may result in the student being required to withdraw from the program.
5. A student is permitted to repeat only one APPE course. A student who fails an APPE course (PHAR 605P, 606P, 607P, 608P) on a second attempt will be required to withdraw from the program.
6. If a failed grade is received in more than one APPE course, the student will be required to withdraw from the program.

### 7.1.3 Student Withdrawal

A student may be required to withdraw from the program at any time, if, in the opinion of the Dean of Pharmacy, the student is unlikely to benefit from continued attendance or if acceptable cause is demonstrated. The Dean will recommend to the Registrar that the student is required to withdraw from the program.

### 7.1.4 Leave of Absence

Upon completion of an Academic year, a student with **Clear Promotion** may elect to withdraw temporarily from studies. Voluntary withdrawal at other times and for other reasons may be permitted in accordance with **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Registration**. In all cases, the intent to withdraw voluntarily should be discussed with the Dean. At the end of this period, the student, in consultation with the Committee on Undergraduate Studies of the School of Pharmacy, should ensure that sufficient revision and preparatory work is undertaken to allow studies to be resumed readily. In the absence of good cause, any such student who does not resume studies on the specified date may be deemed to have left the program.

## 7.2 Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program

### 7.2.1 General Information

1. The Committee on Undergraduate Studies of the School of Pharmacy will determine each student's promotion status at the end of each Academic year.
2. In addition to meeting the promotion regulations for the School, students must meet the general academic regulations (undergraduate). For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate)**.
3. Success in the program depends on meeting the requirements of all terms.

### 7.2.2 Promotion Status

A student's promotion status at the end of each Academic year will be in one of the following two categories

#### 7.2.2.1 Clear Promotion

Clear Promotion means a student can proceed to the next Academic year. Clear Promotion will be granted when all of the following criteria are met:

1. A student has obtained a grade of pass (numeric grade of at least 50% or PAS) in each course as outlined in **Table 2 Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program**.
2. In the academic years where PHAR 4900 and 6900 are taken, a student has attended the relevant course (PHAR 4900 or 6900) on-campus and obtained a grade of PAS (pass) in the course.
3. A student has maintained professional and ethical behaviour consistent with the *Student Code of Conduct* as outlined at [www.mun.ca/student/sscm/conduct/](http://www.mun.ca/student/sscm/conduct/) and with the requirements for conduct and professionalism in the School of Pharmacy as outlined at [www.mun.ca/pharmacy](http://www.mun.ca/pharmacy).

#### 7.2.2.2 Promotion Denied

Promotion Denied means **Clear Promotion** is not achieved at the end of the Academic year. Promotion Denied will be granted when any of the following criteria are met:

1. A student has obtained less than a pass (numeric grade of less than 50% or FAL) in any course as outlined in **Table 2 Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program**.
2. In the academic years where PHAR 4900 and 6900 are taken, a student has failed to attend the relevant course (PHAR 4900 or 6900) on-campus and/or has obtained a grade of FAL (fail).
3. A student has maintained professional and ethical behaviour consistent with the *Student Code of Conduct* as outlined at [www.mun.ca/student/sscm/conduct/](http://www.mun.ca/student/sscm/conduct/) and with the requirements for conduct and professionalism in the School of Pharmacy as

outlined at [www.mun.ca/pharmacy](http://www.mun.ca/pharmacy).

Notwithstanding the above, the School of Pharmacy may offer the student the option to repeat a course on the grounds of academic difficulties. This may be offered only once during the student's program. This restriction may be waived if it has been demonstrated that the student's academic performance has been adversely affected by factors duly authenticated and acceptable to Committee on Undergraduate Studies of the School of Pharmacy.

### 7.2.2.3 Other Information

To be recommended for graduation, a student must have Clear Promotion after successful completion of all course requirements.

1. Applied Learning courses (PHAR 4910, 5920, 6930):
  - A student is permitted to repeat only one Applied Learning course. A student who fails an Applied Learning course on a second attempt will be required to withdraw from the program.
  - If a failed grade is received in more than one Applied Learning course, the student will be required to withdraw from the program.
  - In certain circumstances (such as violation of the *Student Code of Conduct* as outlined at [www.mun.ca/student/sscm/conduct/](http://www.mun.ca/student/sscm/conduct/)), failure of an Applied Learning course may result in the student being required to withdraw from the program.
2. Advanced Pharmacy Practice Experiences courses (PHAR 610P, PHAR 611P):
  - Normally, if a student fails an APPE course, Pharmacy's Committee on Undergraduate Studies may permit the student to continue to the student's next scheduled APPE course and require the student to repeat the failed course at a later date. This may extend the duration of the student's program.
  - A student is permitted to repeat only one APPE course. A student who fails an APPE course on a second attempt will be required to withdraw from the program.
  - If a failed grade is received in more than one APPE course, the student will be required to withdraw from the program.
  - In certain circumstances (such as violation of the *Student Code of Conduct* as outlined at [www.mun.ca/student/sscm/conduct/](http://www.mun.ca/student/sscm/conduct/)), failure of an Applied Learning course may result in the student being required to withdraw from the program.

### 7.2.3 Student Withdrawal

Upon completion of an Academic year, a student with **Clear Promotion** may elect to withdraw temporarily from studies. Voluntary withdrawal at other times and for other reasons may be permitted in accordance with **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Registration**. In all cases, the intent to withdraw voluntarily should be discussed with the Dean. At the end of this period, the student, in consultation with the Committee on Undergraduate Studies of the School of Pharmacy, should ensure that sufficient revision and preparatory work is undertaken to allow studies to be resumed readily. In the absence of good cause, any such student who does not resume studies on the specified date may be deemed to have left the program.

### 7.2.4 Leave of Absence

Upon completion of an Academic year, a student with Clear Promotion may elect to withdraw temporarily from studies. Voluntary withdrawal at other times and for other reasons may be permitted in accordance with **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Registration**. In all cases, the intent to withdraw voluntarily should be discussed with the Dean. At the end of this period, the student, in consultation with the Committee on Undergraduate Studies of the School of Pharmacy, should ensure that sufficient revision and preparatory work is undertaken to allow studies to be resumed readily. In the absence of good cause, any such student who does not resume studies on the specified date may be deemed to have left the program.

## 8 Supplementary and Deferred Examination Regulations

1. Supplementary examinations may be permitted in some courses offered by the School of Pharmacy. Students seeking to write a supplementary midterm or final examination shall apply in writing by completing the "Application for Supplementary Examination" form which is available from the School's website at [www.mun.ca/pharmacy/programs/bsc/currentstudents.php](http://www.mun.ca/pharmacy/programs/bsc/currentstudents.php).
2. This form must be submitted within seven days following release of midterm marks in the case of supplementary midterm examinations or within seven days following release of the final grades in the case of supplementary final examinations. The completed form should be submitted to the Dean's Office for consideration.
3. The transcript will indicate that the final grade was earned as a result of a supplementary examination. Course coordinators shall advise students in the course outline that such a notation will be made on the transcript.
4. A student shall be permitted to write a maximum number of one supplementary examination (excluding Pharmacy Practice courses) during each Academic year of the pharmacy program. For any one registration in a course, a student shall be permitted to write a final supplementary examination only once.
5. For further details please refer to the School's Supplementary Examination Policy which is available at [www.mun.ca/pharmacy](http://www.mun.ca/pharmacy) or contact the Associate Dean of Undergraduate Studies.
6. Memorial University of Newfoundland has official regulations regarding deferred final examinations, available at **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Exemptions From Final Examinations and Procedures for Applying to Write Deferred Examinations**. Deferred midterm examinations may be permitted in some courses offered by the School of Pharmacy. For details refer to the School's Deferred Examination Policy at [www.mun.ca/pharmacy](http://www.mun.ca/pharmacy) or contact the Associate Dean of Undergraduate Studies.

## 9 Graduation

Upon meeting the qualifications for any of the programs of the School of Pharmacy, a student must apply by the appropriate deadline date to graduate on the prescribed "Application for Graduation" form. This form may be obtained on-line at the Memorial Self Service at [www3.mun.ca/admit/twbkwbis.P\\_WWWLogin](http://www3.mun.ca/admit/twbkwbis.P_WWWLogin). Additional information is available from the Office of the Registrar at [www.mun.ca/regoff/graduation/apply\\_grad.php](http://www.mun.ca/regoff/graduation/apply_grad.php).

## 10 Waiver of School Regulations

A student has the right to request waiver of School regulations. A student wishing waiver of University academic regulations should refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Waiver of Regulations**.

## 10.1 General Information

1. The School reserves the right in special circumstances to modify, alter, or waive any School regulation in its application to individual students where merit and equity so warrant in the judgment of the Committee on Undergraduate Studies of the School of Pharmacy.
2. All requests must be submitted to the Committee on Undergraduate Studies of the School of Pharmacy for consideration. A student requesting a waiver of a School regulation must submit the request in writing to the Chair of the Committee on Undergraduate Studies of the School of Pharmacy. Medical and/or other documentation to substantiate the request must be provided.
3. Any waiver granted does not reduce the total number of credit hours required for the degree.

## 11 Appeal of Regulations

Any student whose request for waiver of School regulations has been denied has the right to appeal. For further information refer to **UNIVERSITY REGULATIONS - General Academic Regulations (Undergraduate) - Appeal of Decisions**.

- An applicant who has been denied admission has the right to appeal this decision of the Committee on Undergraduate Student Admissions of the School of Pharmacy if it is felt by the applicant that the decision was reached on grounds other than those outlined in the **Admission Regulations - Doctor of Pharmacy (Pharm.D.), Full-Time Program** and **Admission Regulations - Doctor of Pharmacy (Pharm.D.) for Working Professionals, Part-Time Program**. The appeal should be made in writing within fourteen days of the notification of the decision and should be directed to the Dean of the School. The letter should state clearly and fully the grounds for the appeal. If the Dean of the School, in consultation with the Registrar, judges the grounds to be sufficient, the formal appeals mechanism will be initiated.

## 12 Course Descriptions

In accordance with *Senate's Policy Regarding Inactive Courses*, the course descriptions for courses which have not been offered in the previous three Academic years and which are not scheduled to be offered in the current Academic year have been removed from the following listing. For information about any of these inactive courses, please contact the Dean of the School.

A student is advised to pay attention to Usage Limitation (UL) for each course to determine its program applicability.

All courses of the School are designated by PHAR and are restricted to students in the School of Pharmacy.

**2002 Anatomy and Physiology I** provides an overview of human anatomy and physiology throughout the lifespan. It includes aspects of cytology and histology that form a foundation for the practice of pharmacy. The focus will be on developing an understanding of the interrelationships and integration of all systems from the cell to whole organism. Special emphasis is given to the skeletal, muscular, nervous, and endocrine systems.

CR: Nursing 1002  
LH: 2; attendance is required  
PR: Science 1807

**2003 Anatomy and Physiology II** provides an overview of human anatomy and physiology throughout the lifespan. It includes aspects of cytology and histology that form a foundation for the practice of pharmacy. The focus will be on developing an understanding of the interrelationships and integration of all systems from cell to whole organism. Special emphasis is given to the endocrine, circulatory, respiratory, urinary, digestive, and reproductive systems.

CR: Nursing 1012  
LH: 2; attendance is required  
PR: PHAR 2002 and Science 1807

**2004 Introduction to Biochemistry** is an introduction to the major organic substances of living organisms, proteins, carbohydrates and lipids: their structure, analysis and biochemical function. Other topics include: enzymes; the biochemistry of membranes, including the plasma membrane and specialized intracellular membranes; and the biochemistry of selected differentiated cells.

CR: Biochemistry 2101  
OR: tutorials as required  
PR: Chemistry 2400 and 2401 or Chemistry 2440

**2010 Service Learning** requires completion of 20 hours of service in the community in any term within the first year of the program. Students will engage in projects or activities which will benefit both the host organization and the student. It will occur in an approved setting either in the academic community or with an off-campus community group. The goal is to provide opportunities for the student to develop communication and self-reflective learning skills, acquire new frames of reference and perspectives, and gain an enhanced sense of civic responsibility.

CH: 0  
OR: 20 hours of service learning

**201W Structured Practice Experience I** is a structured practice experience in community pharmacy after completion of the first year which will provide an opportunity for students to apply their technical skills and introduce them to patient care activities. The structured practice experience is normally comprised of four weeks during May/June.

AR: attendance is required

CH: 0  
LC: 0  
PR: successful completion of all courses in Academic Terms 1 & 2 of the program  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**2101 Pharmacy Practice I** provides an introduction to the legal and professional framework of the practice of pharmacy. Pharmacy regulations in the dispensing of medications and provincial legislation that governs the practice of pharmacy will be the focus. Students will be introduced to core competencies of the profession including professionalism, interprofessionalism, pharmaceutical calculations, drug information and effective communication strategies for the provision of pharmacist care. Application of course content will occur in the concurrent course PHAR 2650.

CO: PHAR 2650  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**2102 Pharmacy Practice II** continues the introduction to the legal and professional framework of the practice of pharmacy. The course will focus on federal legislation that governs the practice of pharmacy, drug information, patient education and methods to deal with challenging patient behaviours. Students will be introduced to pharmaceutical care and begin to develop a pharmacist care plan. Students will participate in interprofessional education (IPE) modules with students from other health related programs when such modules are available. The passing grade in this course is 70%, failing which the student may be required to withdraw from the program.

CH: 2  
CO: PHAR 2651  
LC: 2  
OR: tutorials 2 hours per week; attendance is required  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**2201 Pharmaceutics I** provides an insight into a number of physicochemical basics and explains them within a pharmaceutical context. The course provides the basic foundation necessary for the study of pharmaceutical dosage forms, pharmacokinetics and bio-pharmaceutics.

LH: 3; attendance is required  
PR: Mathematics 1000 and 1001; and Chemistry 1050 and 1051, or Chemistry 1200 and 1001, or equivalent; and Science 1807

**2202 Pharmaceutics II** is designed to provide the student with an understanding of pharmaceutical dosage forms and their applications. It applies the principles taught in Pharmaceutics I to understand the design and components of the different pharmaceutical preparations.

LH: 3; attendance is required  
PR: PHAR 2201 and Science 1807

**2203 Pharmaceutical Analysis** is designed to introduce some important techniques and methods of analysis in pharmaceutical sciences. The laboratory exercises consist of both non-instrumental and instrumental analytical techniques that are widely employed in the analysis of pharmaceuticals.

CH: 2  
LC: 2  
LH: 3 hours every other week; attendance is required  
PR: Chemistry 1050 and 1051 or Chemistry 1200 and 1001 or equivalent  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**2250 Pharmacy Practice I** is the first of a series of courses where students acquire and apply the knowledge, skills, and attitudes necessary for the practice of pharmacy. The course will include an introduction to calculations, technical skills and the legal and regulatory framework of the practice of

pharmacy. The development of competence in the areas of patient care, drug information, communication, professionalism, critical thinking, and teamwork will begin. Application of knowledge and skills will occur in simulated pharmacy practice situations.

AR: attendance is required in practice sessions

CH: 5

CO: all Academic Term 1 Pharmacy courses, with the exception of PHAR 2010

OR: practice sessions 2 hours per week

**2251 Pharmacy Practice II** continues the acquisition, development, and application of the knowledge, skills, and attitudes necessary for the practice of pharmacy. The legal and professional framework of the practice of pharmacy, patient counselling, and technical skills will be emphasized. Development of competence in the areas of patient care, drug information, communication, professionalism, critical thinking, and teamwork will occur. Application of knowledge and skills will take place in real and simulated pharmacy practice situations.

AR: attendance is required in practice sessions

CH: 5

CO: all Academic Term 2 Pharmacy courses, with the exception of PHAR 2010

LC: 2

OR: practice sessions 3 hours per week

PR: PHAR 2250

**2610 Health Systems** provides an introduction to the Canadian healthcare system, its development, history, structure, and financing. The federal and provincial governments' involvement in the healthcare system and health policy will be presented. The roles and responsibilities of the pharmacist within healthcare will also be examined.

**2620 Social and Ethical Behaviour** introduces the social and cultural factors and determinants that influence health in Canada, and their ethical implications. Theoretical approaches from a social perspective, including value systems in Canada, ethical dilemmas and the role of ethics in pharmacy practice will be discussed.

CH: 2

LC: 2

PR: PHAR 2610

**2650 Pharmacy Skills** provides an introduction to the skills necessary for pharmacy practice in order to meet the educational outcomes for the first year of the pharmacy program. This course is the first in a series of Pharmacy Skills courses, all of which require students to acquire and apply the knowledge, attitudes and skills necessary for the effective practice of the profession. Students will begin to develop abilities in communication, professionalism, critical thinking, problem-solving, teamwork and self-directed learning. Students will apply basic knowledge and skills in drug information, technology, interpersonal communications and pharmacy legislation to simulated practice situations. Students will develop public communication skills through the completion of a professional communications program. Activities in this course will complement material covered in the concurrent course PHAR 2101.

CO: all Academic Term 1 Pharmacy courses

CR: the former PHAR 2150

LC: 0

OR: practical sessions 3 hours per week; tutorials 1 hour per week; attendance is required

UL: applicable only to the Bachelor of Science (Pharmacy) program

**2651 Pharmacy Skills** provides an introduction to the skills necessary for pharmacy practice in order to meet the education outcomes for the first year of the pharmacy program. Students will continue to develop abilities in communication, professionalism, critical thinking, problem-solving, teamwork and self-directed learning. Pharmacy practice in the community pharmacy setting will be a focus. Students will develop dispensing, drug information and pharmaceutical calculations skills relevant to community pharmacy practice. Students will begin developing their patient interaction and patient education skills. Activities in this course will complement material covered in the concurrent PHAR 2102. Students will participate in interprofessional education (IPE) modules with students from other health related programs when such modules are available.

CO: all Academic Term 2 Pharmacy courses

CR: the former PHAR 2151

LC: 0

OR: practical sessions 3 hours per week; tutorials 1 hour per week; attendance is required

PR: PHAR 2101 and 2650

UL: applicable only to the Bachelor of Science (Pharmacy) program

**3003 Pathophysiology** examines the nature of disease, causes and effects, and alteration in structure and function of cells, inflammation, neoplasia, genetic and chromosomal diseases, healing and repair, stress and disease.

PR: PHAR 2003 or equivalent

UL: applicable only to the Bachelor of Science (Pharmacy) program

**3006 Immunology** (same as Biochemistry 4105 and Biology 4200) is an introduction to the cells and organs of the innate and adaptive immune

systems. The molecular and cellular basis of allergy, autoimmunity, vaccination and cancer immunology will also be discussed.

CR: Biochemistry 4105, Biology 4200, and the former PHAR 4105

PR: PHAR 2004

**3009 Pharmacology** explores topics in general pharmacology including drugs used in the treatment of inflammatory diseases, renal pharmacology, anticoagulant and antithrombotic drugs, antihyperlipidemics, drugs used in the treatment of anemia, and endocrine pharmacology.

PR: Medicine 4300 or equivalent

UL: applicable only to the Bachelor of Science (Pharmacy) program

**302W Structured Practice Experience II** is a structured practice experience in hospital pharmacy after completion of the second year which will provide an opportunity for students to apply their technical skills and introduce them to patient care activities. The practical experience is normally comprised of four weeks during May/June.

AR: attendance is required

CH: 0

LC: 0

PR: successful completion of all courses in Academic Terms 3 & 4 of the program

UL: applicable only to the Bachelor of Science (Pharmacy) program

**305P Pharmacy Practice Experience I** provides six weeks (240 hours) of practice experience in a community pharmacy. The focus will be on the legal and regulatory framework governing pharmacy practice, prescription processing, gathering and assessing patient information, patient education, drug information, health promotion, and quality assurance. Students will apply their knowledge and skills in the provision of patient care. Effective communication skills, professionalism, and teamwork are expected.

AR: attendance is required

PR: all Academic Term 4 & 5 courses

**3103 Microbiology of Infectious Diseases** examines the various types of micro-organisms (bacterial, viral, parasitic and fungal), the environment in which they are able to multiply and their relationship to human diseases. The classifications of their morphology, mode of reproduction and the metabolic process, the physiological and epidemiological principles of infectious diseases and their manifestations are discussed including the principles of immunization.

UL: applicable only to the Bachelor of Science (Pharmacy) program

**3111 General Biochemistry** covers the catabolism of carbohydrates, lipids and amino acids. Mitochondria, chloroplasts and ATP synthesis. Biosynthesis of carbohydrates and lipids. Metabolic specialization of differentiated cells and tissues. Integration of metabolism.

CR: Biochemistry 3106

OR: tutorials as required

PR: PHAR 2004 or Biochemistry 2101

**3203 Medicinal Chemistry I** presents topics covering the molecular basis of action, metabolism, and toxicity of drugs. It provides an orientation to medically important nuclei and their nomenclature, followed by principles of drug discovery and development. The relationship between molecular structure and biological action of drugs together with elementary molecular modelling, and theories related to receptors and drug action will be presented. Concepts of drug metabolism and the relevant metabolic pathways in relationship to drug inactivation and toxicity, along with the principles of drug latention and prodrugs is covered. The structures, selected physicochemical properties, mechanism of action, structure-activity relationships, toxic effects at molecular level, and metabolism of drugs including central nervous system.

CO: Medicine 4300 and PHAR 3003

OR: tutorials 1 hour per week; attendance is required

PR: Chemistry 2440 or Chemistry 2401

UL: applicable only to the Bachelor of Science (Pharmacy) program

**3204 Medicinal Chemistry II** is a continuation of Pharmacy 3203 and focuses on the structures, selected physicochemical properties, mechanism of action, structure-activity relationships, toxic effects at molecular level, and metabolism of different pharmacological classes of drugs including cholinergic agents, analgetic and anti-inflammatory agents, insulin and oral antidiabetic drugs, steroids and related compounds, antihyperlipidemic agents, histamine and antihistaminic agents, diuretic agents, angiotensin converting enzyme inhibitors and antagonists, and calcium channel blockers.

CO: PHAR 3009

OR: tutorials 1 hour per week; attendance is required

PR: PHAR 3203

UL: applicable only to the Bachelor of Science (Pharmacy) program

**3205 Pharmaceutics III** consists of several units. The standards of good manufacturing practice will be introduced. Characteristics, preparation, quality assurance and delivery systems for sterile products will be covered. The basic principles governing the application of radiation and radioactive compounds in medical diagnosis and therapy will be discussed. The status of current biotechnology-based pharmaceuticals and biotechnology related matters will be addressed.

PR: PHAR 2202  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**3250 Pharmacy Practice III** continues the acquisition, development, and application of the knowledge, skills, and attitudes necessary for the practice of pharmacy. The focus will include patient assessment, care plan development, counselling, follow-up, interprofessional collaboration, and communication with special patient populations. Emphasis will be on the development of competence in the areas of patient care, drug information, communication, professionalism, critical thinking, and teamwork. Application of knowledge and skills will occur in real and simulated pharmacy practice situations.

AR: attendance is required  
CH: 5  
CO: all Academic Term 4 Pharmacy courses  
LC: 2  
OR: practice sessions 3 hours per week  
PR: PHAR 2251

**3251 Pharmacy Practice IV** continues the acquisition, development, and application of the knowledge, skills, and attitudes necessary for the practice of pharmacy. This course will build on pharmacy practice concepts and will emphasize patient safety. Development of competence in the areas of patient care, drug information, communication, professionalism, critical thinking, and teamwork will occur. Application of knowledge and skills will take place in simulated pharmacy practice situations.

AR: attendance is required  
CH: 5  
CO: all Academic Term 5 Pharmacy courses  
LC: 2  
OR: practice sessions 3 hours per week  
PR: PHAR 3250

**3270 Pharmacotherapy I** introduces pharmacotherapeutic management of common diseases and effective management of patients' drug therapy. Emphasis will be placed on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy, and safety. Topics may include drug interactions, gastroenterological conditions, musculoskeletal conditions, nutrition, and special populations.

CH: 5  
CO: PHAR 3250, 3801, and 3805  
LC: 5

**3271 Pharmacotherapy II** continues the discussion of pharmacotherapeutic management of common diseases and effective management of patients' drug therapy. Emphasis will be placed on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy, and safety. Topics may include cardiovascular, dermatological, respiratory, and infectious diseases.

CH: 4  
CO: PHAR 3251  
LC: 4  
PR: PHAR 3270, 3801, and 3805

**3301 Patient Care I** is an introductory course in patient care, especially in the areas of self-care and self-treatment and the role of the pharmacist. The regulatory environment of non-prescription products and the prevention and treatment of health conditions amenable to self-management will be discussed.

CO: PHAR 3009  
PR: Medicine 4300  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**3410 Leadership and Health Promotion** focuses on the roles of leadership, advocacy, and health promotion in pharmacy to improve patient care. Insight into leadership skills and the roles of educating, advocating, and promoting health to patients, families, communities, and society will be discussed. The change process and the leader's role in change will be introduced.

**3650 Pharmacy Skills** continues the development of the skills necessary for pharmacy practice in order to meet the educational outcomes for the second year of the pharmacy program. Students will continue to develop abilities in communication, professionalism, critical thinking, problem-solving, teamwork and self-directed learning. Pharmacy practice in the hospital setting will be a focus. Students will participate in sterile product preparation and practice drug information and pharmaceutical calculation skills relevant to hospital practice. Students will develop pharmacist care plans and will further develop their patient education skills. Scenarios will relate to the courses of study in the second year and draw on material studied in earlier years of the program. Students will participate in interprofessional education (IPE) modules with students from other health related programs when such modules are available.

CO: all Academic Term 3 Pharmacy courses

CR: the former PHAR 3150  
LC: 0  
OR: practical sessions 3 hours per week; tutorials 1 hour per week; attendance is required  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**3651 Pharmacy Skills** continues the development of the skills necessary for pharmacy practice in order to meet the educational outcomes for the second year of the pharmacy program. Students will continue to develop abilities in communication, professionalism, critical thinking, problem-solving, teamwork and self-directed learning. Students will participate in practice sessions necessary to develop an understanding of and skills required in patient assessment and patient education related to patient self-care. Students will build on their pharmacist care skills to meet patients' drug-related needs in uncomplicated patient scenarios and drug information skills to assess information needs. Scenarios will relate to the courses of study in the second year and draw on material studied in earlier years of the program. Students will participate in interprofessional education (IPE) modules with students from other health related programs when such modules are available.

CO: all Academic Term 4 Pharmacy courses  
CR: the former PHAR 3151  
LC: 0  
OR: practical sessions 3 hours per week; tutorials 1 hour per week; attendance is required  
PR: PHAR 3650  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**3801 Pathophysiology I** examines the nature of disease, causes and effects, and alterations in structure and function of cells. Topics may include cardiovascular, dermatological, gastrointestinal, and respiratory diseases.

CH: 2  
CO: PHAR 3270 and 3805  
LC: 2  
PR: PHAR 2003

**3805 Pharmacology I** provides an introduction to the general principles of pharmacology including dose-response relationships, drug-receptor interactions, absorption, distribution, metabolism, and elimination of drugs. The focus will be on the pharmacological basis of the action of drugs leading to therapeutic effects, as well as adverse effects. Topics may include drugs used in the management of cardiovascular, gastrointestinal, respiratory diseases, and anti-inflammatory drugs.

CO: PHAR 3270 and 3801  
PR: PHAR 2003

**3810 Microbiology of Infectious Diseases** examines the various types of micro-organisms (bacterial, viral, parasitic, and fungal), microbial growth, and their relationship to human diseases. The classifications of their morphology, mode of reproduction, and the metabolic process will be discussed.

CH: 2  
LC: 2

**3825 Medicinal Chemistry** examines the functional group recognition and properties of drugs, drug-receptor interactions, structure activity relationships, and rational drug design. The relationship between the chemical structure of a drug and its binding affinity toward intended target enzymes or receptors, and its pharmacological activity, will be discussed.

CR: PHAR 3203 and 3204  
PR: Chemistry 2401 and PHAR 3111

**4008 Chemotherapy** presents the principles of infectious diseases and cancer chemotherapy. Topics to be explored include molecular structure profiles in relation to mechanism of action, drug resistance, and toxicity of antimicrobial, antiviral, and antineoplastic agents. Antimicrobial activity/spectrum of activity of antibacterials, antifungals, antimalarial, antituberculosis, and antiviral/antiretroviral agents will be discussed. The classification and mechanism of action of cancer chemotherapeutic agents will be presented. Pharmacokinetic considerations, adverse effects/toxicity, and drug interactions will be explored for these agents.

CH: 2  
CO: PHAR 4401  
LC: 2  
OR: tutorials 1 hour per week  
PR: Medicine 4300, PHAR 3006, 3009, 3103, 3203 and 3204  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**403W Structured Practice Experience III** is a structured practice experience in community pharmacy after completion of the third year which will provide an opportunity for students to apply their technical skills and practice and participate in patient care activities. The practical experience is normally comprised of four weeks during May/June.

AR: attendance is required  
CH: 0  
LC: 0  
PR: successful completion of all courses in Academic Terms 5 & 6 of the program  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**406P Pharmacy Practice Experience II** provides two weeks (80 hours) of practice experience in a hospital pharmacy practice setting. The focus will be on the operations of a hospital pharmacy, including drug distribution, policies and procedures, and communicating with other healthcare professionals. Students will apply their knowledge and skills in the provision of pharmacy services. Effective communication skills, professionalism, and teamwork are expected.

AR: attendance is required

CH: 1

PR: all Academic Term 7 & 8 courses

**407P Pharmacy Practice Experience III** provides four weeks (160 hours) of practice experience in a direct patient care setting. Emphasis will be on continuing to develop patient care skills by working with a variety of patients and the healthcare team to appropriately identify, prevent, and resolve drug-related problems. Effective communication skills, professionalism, and teamwork, are expected.

AR: attendance is required

CH: 2

PR: all Academic Term 7 & 8 courses

**4201 Applied Pharmacokinetics** (same as the former PHAR 3206) is an introduction to biopharmaceutical and pharmacokinetic principles used in the selection, dosing, monitoring and evaluation of drug therapy. Application of these principles in evaluating drug literature and developing drug dosage regimens of selected classes of drugs for individual patients will be discussed.

CR: the former PHAR 3206

PR: Medicine 4300, PHAR 2202 and 3009

UL: applicable only to the Bachelor of Science (Pharmacy) program

**4250 Pharmacy Practice V** continues the acquisition, development, and application of the knowledge, skills, and attitudes necessary for the practice of pharmacy. Critical appraisal, patient safety, and interprofessional collaboration will be emphasized. Development of competence in the areas of patient care, drug information, communication, professionalism, critical thinking, and teamwork will occur. Application of knowledge and skills will take place in simulated pharmacy practice situations.

AR: attendance is required in practice sessions

CH: 5

CO: all Academic Term 7 Pharmacy courses

LC: 2

OR: practice sessions 3 hours per week

PR: PHAR 3251

**4251 Pharmacy Practice VI** continues the acquisition, development, and application of the knowledge, skills, and attitudes necessary for the practice of pharmacy. Sterile product preparation, drug information, patient safety, and calculations relevant to hospital practice will be introduced. Critical appraisal and interprofessional collaboration will also be a focus. Continued development of competence in the areas of patient care, communication, professionalism, critical thinking, and teamwork will occur. Application of knowledge and skills will take place in simulated pharmacy practice situations.

AR: attendance is required in practice sessions

CH: 5

CO: all Academic Term 8 Pharmacy courses

LC: 2

OR: practice sessions 3 hours per week

PR: PHAR 4250

**4270 Pharmacotherapy III** continues the discussion of pharmacotherapeutic management of common diseases and effective management of the patient's drug therapy. Emphasis will be placed on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy, and safety. Topics may include autoimmune, infectious, and musculoskeletal diseases.

CH: 4

CO: PHAR 4250, 4802, and 4810

LC: 4

PR: PHAR 3006, 3271, and 3810

**4271 Pharmacotherapy IV** continues the discussion of pharmacotherapeutic management of common diseases and effective management of patients' drug therapy. Emphasis will be placed on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy, and safety. Topics may include cardiovascular, endocrine and renal disease, and women's and men's health.

CH: 6

CO: PHAR 4251

LC: 6

PR: PHAR 4270, 4802, and 4810

**4302 Patient Care II** discusses the principal roles of health systems and

health policy with a special emphasis on pharmaceutical policy and its impact on the profession, the public and on the delivery of pharmaceutical care. The principles of health promotion and the role of the pharmacist will be discussed. Students will gain knowledge about health challenges facing society, how education affects health, the roles of the pharmacist in educating and promoting health to patients.

CH: 1

CR: the former PHAR 4301 and the former 3501

PR: PHAR 2101, 2102, and 3301

UL: applicable only to the Bachelor of Science (Pharmacy) program

**4401 Therapeutics I** is a part of a series that looks at the therapeutic management of common diseases. Topics may include but are not restricted to infectious diseases, hematology/oncology, and dermatology. For each disease state discussion will centre around several key issues including: the establishment of desired therapeutic outcomes; development of appropriate pharmacological and non-pharmacological therapeutic alternatives; factors to be considered to aid in the selection of an individualized therapeutic regimen; and the development of a monitoring plan to evaluate efficacy and safety.

CH: 6

CO: PHAR 4008 and 4201

LC: 6

OR: tutorials 2 hours per week; attendance is required

PR: Medicine 4300, PHAR 3006 and 3009

UL: applicable only to the Bachelor of Science (Pharmacy) program

**4402 Therapeutics II** is a part in a series that looks at the therapeutic management of common diseases. Topics may include but are not restricted to women's health, men's health, gastroenterology, musculoskeletal, neurological, respiratory disorders and transplantation. For each disease state discussion will centre around several key issues including: the establishment of desired therapeutic outcomes; development of appropriate pharmacological and non-pharmacological therapeutic alternatives; factors to be considered to aid in the selection of an individualized therapeutic regimen; and the development of a monitoring plan to evaluate efficacy and safety.

CH: 6

LC: 6

OR: tutorials 2 hours per week; attendance is required

PR: PHAR 4401

UL: applicable only to the Bachelor of Science (Pharmacy) program

**4420 Pharmacy Management I** introduces the principles of management and leadership as they relate to pharmacy practice. Topics will include the pharmacy practice environment, human resources management, financial management, operations management, marketing, risk management, quality control and improvement, and effective communications.

**4503 Pharmacy Administration** introduces students to the basic principles of management as it relates to pharmacy practice. Topics will include human resources and financial management, marketing, strategic planning and the principles and issues associated with safe and appropriate drug distribution. These will be discussed from both a community and an institutional practice focus.

UL: applicable only to the Bachelor of Science (Pharmacy) program

**4504 Pharmacy Research and Evaluation I** introduces the biostatistical, pharmacoepidemiologic and pharmaco-economic concepts and develops the skills necessary to the practice of research and evaluation methods in applied pharmacy. The understanding of such methods is an important prerequisite in the critical appraisal of the health literature and the undertaking of evidence-based clinical practice.

CR: the former PHAR 4501

UL: applicable only to the Bachelor of Science (Pharmacy) program

**4505 Pharmacy Research and Evaluation II** introduces students to principles of critical appraisal and provides opportunities to apply these principles to critique and evaluate current medical literature. Students will be assigned to a tutorial group, which will meet twice during the term to critically appraise at least two recently published studies (journal club). Emphasis will be placed on appropriate application of critical appraisal skills and group discussion of impact of study findings on clinical practice. In addition, this course will also discuss drug utilization reviews and evaluations and the role of the pharmacist, as well as adverse drug event reporting and the role of the pharmacist.

CH: 1

CR: the former PHAR 4502

LC: 1

OR: tutorials 1 hour per week; attendance is required

PR: PHAR 4504 or equivalent

UL: applicable only to the Bachelor of Science (Pharmacy) program

**4620 Applied Health Research** introduces the fundamentals of research design, methods, and appraisal necessary to develop the skills to analyze and interpret clinical research. Topics include randomized clinical trials, observational studies, and pharmaco-economic evaluations. Emphasis will be placed on making valid inferences about drug safety and effectiveness from scientific research. Principles of critically appraising the medical

literature will be introduced.  
CO: Statistics 2550

**4650 Pharmacy Skills** continues the development of the skills necessary for pharmacy practice in order to meet the educational outcomes for the third year of the pharmacy program. Students will continue to develop abilities in communication, professionalism, critical thinking, problem-solving, teamwork and self-directed learning. Students will participate in practice sessions necessary to develop an understanding of and skills required in patient assessment. Students will build on their pharmacist care skills to meet patients' drug-related needs in more complex patient scenarios, drug information skills to assess information needs, and medication preparation and dispensing skills to optimize safe and accurate medication delivery. Scenarios will relate to the courses of study in the third year and draw on material studies in earlier years of the program. Students will participate in interprofessional education (IPE) modules with students from other health related programs when such modules are available.

CO: all Academic Term 5 Pharmacy courses

CR: the former PHAR 4150

LC: 0

OR: practical sessions 3 hours per week; tutorials 1 hour per week; attendance is required

UL: applicable only to the Bachelor of Science (Pharmacy) program

**4651 Pharmacy Skills** continues the development of the skills necessary for pharmacy practice in order to meet the educational outcomes for the third year of the pharmacy program. Students will continue to develop abilities in communication, professionalism, critical thinking, problem-solving, teamwork and self-directed learning. Students will participate in sessions that focus on ethical issues in pharmacy practice and communication with health care providers. Students will build on their patient assessment and pharmacist care skills to meet patients' drug-related needs in more complex patient scenarios and will use critical appraisal skills to respond to clinical questions. Scenarios will relate to the courses of study in the third year and draw on material studied in earlier years of the program. Students will participate in interprofessional education (IPE) modules with students from other health related programs when such modules are available.

CO: all Academic Term 6 Pharmacy courses

CR: the former PHAR 4151

LC: 0

OR: practical sessions 3 hours per week; tutorials 1 hour per week; attendance is required

PR: PHAR 4650

UL: applicable only to the Bachelor of Science (Pharmacy) program

**4802 Pathophysiology II** examines the nature of disease, causes and effects, and alterations in structure and function of cells. Topics may include endocrine disorders, renal, rheumatological and neurological diseases, neoplasia, and women's and men's health.

CO: PHAR 4270 and 4810

PR: PHAR 3801

**4810 Pharmacology II** will focus on the pharmacological basis of the action of drugs leading to therapeutic effects, as well as adverse effects. Topics may include drugs used in the management of infectious diseases, the endocrine system, and inflammatory diseases, as well as hormonal drugs and analgesics.

CH: 2

CO: PHAR 4270 and 4802

LC: 2

PR: PHAR 3006, 3805, and 3810

**4820 Pharmacokinetics** is an introduction to the biopharmaceutical and pharmacokinetic principles used in the selection, dosing, and monitoring of drug therapy. The concepts of absorption, distribution, metabolism and elimination, pharmacokinetic and pharmacodynamics mechanisms of drug interactions, and the importance of drug monitoring will be explored.

CH: 2

LC: 2

PR: PHAR 2202 and 3805

**4860 Pharmacogenomics and Biotechnology** provides insight into the development of biopharmaceuticals. Formulation, stability, dispensing, and clinical applications of biotechnology derived protein/peptide drugs will be discussed. The fundamental concepts of pharmacogenetics and pharmacogenomics will be explored. A focus will be on understanding how personalized drug therapy, based on the genetic profile of individuals, can optimize drug therapy and patient care.

CH: 2

LC: 2

PR: PHAR 2202 and 3111

**4900 Clinical Skills I** is an on-campus, three-day (21 hours) orientation to the fundamental knowledge and skills for advanced practice. Topics may include the principles of prescribing, point-of-care testing, drug information skills, physical assessment, and advanced communication skills. This course may commence beyond the semester start date.

AR: attendance is required

CH: 2

CO: PHAR 4901 and 4902

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**4901 Essentials of Pharmacy Practice** provides the foundational principles and skills of pharmacy practice such as documentation, special populations, and pharmacokinetics. Health systems, social justice, and informatics may also be explored.

CH: 4

CO: PHAR 4900 and 4902

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**4902 Pharmacy Management and Leadership** explores the principles of change management and leadership as they relate to pharmacy practice. Topics may include the business environment, financial management, continuous quality improvement, business marketing and promotion, human resources management, pharmacy services implementation, effective pharmacy operations, and technology in pharmacy practice.

CH: 2

CO: PHAR 4900 and 4901

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**4903 Evidence-Based Practice** integrates advanced drug information, therapeutic decision-making, critical evaluation of medical literature, and synthesis of information to form reliable therapeutic recommendations using the principles of evidence-based practice. Topics may include critical appraisal of drug therapy and pharmacy practice research.

PR: PHAR 4900, 4901, and 4902

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**4910 Applied Learning I: Leadership and Education** focuses on the development of leadership skills to implement change in practice through education and advocacy. Topics may include: learning styles, facilitation skills, instructional design, and teaching methods. Principles of health promotion and the importance of advocating change will also be explored. Students will demonstrate their learning through the completion of applied learning activities at their practice sites.

PR: PHAR 4902

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**500X Structured Practice Experience IV** provides experience in clinical practice. Students will participate as members of the health care team. They will be responsible for providing pharmaceutical care to patients. Activities will include attending patient care rounds, providing in-services and drug information, and participating in case presentations. The structured practice experience is comprised of two six week modules.

AR: attendance is required

CH: 18

LC: 0

PR: successful completion of all course requirements for the degree and Clear Promotion

UL: applicable only to the Bachelor of Science (Pharmacy) program

**508P Pharmacy Practice Experience IV** provides two weeks (80 hours) of practice experience during Academic Term 11 in an institutional direct patient care setting. This course serves as a transition to the Advanced Pharmacy Practice Experience. Emphasis will be on developing independence in providing patient care under the mentorship of a preceptor or of an advanced practice pharmacy student. Effective communication skills, professionalism, and teamwork are expected.

AR: attendance is required

CH: 1

PR: all Academic Term 10 courses

**5250 Pharmacy Practice VII** continues the acquisition, development, and application of the knowledge, skills, and attitudes necessary for the practice of pharmacy. Critical appraisal, patient safety, and interprofessional collaboration will be emphasized. Continued development of competence in the areas of patient care, communication, professionalism, critical thinking, and teamwork will occur. Students will be expected to demonstrate increased independence during the application of knowledge and skills in simulated pharmacy practice situations.

AR: attendance is required in practice sessions

CH: 5

CO: all Academic Term 10 Pharmacy courses

LC: 2

OR: practice sessions 3 hours per week

PR: PHAR 4251

**5251 Pharmacy Practice VIII** is the final course in the series where students acquire, develop, and apply the knowledge, skills, and attitudes necessary for the practice of pharmacy. Demonstration of competence in the areas of patient care, drug information, communication, professionalism, critical thinking, and teamwork will be expected. Application of knowledge and skills will occur in simulated pharmacy practice situations.

AR: attendance is required in practice sessions

CH: 4

CO: all Academic Term 11 Pharmacy courses

LC: 2

OR: practice sessions 3 hours per week; course runs over 10 weeks to

accommodate PHAR 508P  
PR: PHAR 5250

**5270 Pharmacotherapy V** is the final course in the series that examines the pharmacotherapeutic management of common diseases and effective management of the patient's drug therapy. Emphasis will be placed on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy, and safety. Topics may include neurological, oncological, and addictions and mental health conditions.

CH: 6  
CO: PHAR 5815  
LC: 6  
PR: PHAR 4271

**5271 Advanced Pharmacotherapy** expands and integrates the knowledge and skills acquired from the Pharmacotherapy series of courses through application to complex patient scenarios. Critical thinking skills necessary for optimizing pharmacotherapy in a variety of patient care situations will be the focus of the course.

CH: 5  
LC: 6  
OR: course runs over 10 weeks to accommodate PHAR 508P  
PR: PHAR 5270

**5275 Symposium in Pharmacy** is a forum for students to research, develop and deliver formal presentations related to pharmacy practice. Students will be expected to interpret, synthesize, and present information effectively. The presentations will allow for application of knowledge and reflection on content.

AR: attendance is required  
CH: 2  
CO: PHAR 5251  
LC: 2

**5301 Clinical Toxicology** covers the toxicology and clinical management of toxicity associated with common medications.

CH: 2  
CO: PHAR 5401  
LC: 2  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**5302 Patient Care III** focuses on pharmaceutical care considerations in special patient populations (e.g., geriatrics, neonates, pediatrics, pregnancy and lactation, critically ill, etc.). Implementation of pharmaceutical care in hospital, ambulatory and community practice settings will be discussed.

CO: PHAR 5401  
OR: tutorials 1 hour per week; attendance is required  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**5401 Therapeutics III** is part in a series that looks at the therapeutic management of common diseases. Topics may include but are not restricted to endocrine, psychiatric, renal and cardiovascular disorders. For each disease state discussion will centre around several key issues including: the establishment of desired therapeutic outcomes; development of appropriate pharmacological and non-pharmacological therapeutic alternatives; factors to be considered to aid in the selection of an individualized therapeutic regimen; and the development of a monitoring plan to evaluate efficacy and safety.

CH: 6  
LC: 6  
OR: tutorials 2 hours per week  
PR: PHAR 4402  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**5430 Pharmacy Management II** prepares students for the various roles of management in pharmacy practice, regardless of position or practice setting. Management principles including communications, leadership, finance, human resources management, marketing, and promotion will be applied through demonstrating leadership, business planning, and pharmacy service implementation.

CH: 2  
LC: 2  
PR: PHAR 4420

**5506 Pharmacy Research and Evaluation III** (same as the former PHAR 5501) discusses the principles of critical appraisal and provides opportunities to apply these principles to critique and evaluate current medical literature. Students will be assigned to a tutorial group, which will meet twice during the term to critically appraise at least two recently published studies. Emphasis will be placed on appropriate application of critical appraisal skills and group discussion of impact of study findings on clinical practice.

CH: 1  
CR: the former PHAR 5501  
LC: 0  
OR: tutorials 1 hour per week

PR: PHAR 4505 or equivalent  
UL: applicable only to the Bachelor of Science (Pharmacy) program

**5640 Social Justice and the Pharmacist** will enable students to critically analyse the role of social justice as an integral part of the practice of pharmacy. The course will include a focus on the interconnectedness of health equity with global contexts that include social class, ethnicity, gender, ability, and mental health. Critical thinking skills will be used to examine complex health and social issues.

CH: 2  
LC: 2

**5650 Pharmacy Skills** (same as the former PHAR 5150) continues the development of the skills necessary for pharmacy practice in order to meet the educational outcomes for the fourth year of the pharmacy program. Students will continue to develop abilities in communication, professionalism, critical thinking, problem-solving, teamwork and self-directed learning. Students will build on their pharmacist care skills to meet patients' drug-related needs in patients with multiple drug related problems. Refinement of verbal and written communication skills will be focus. Scenarios will relate to the courses of study in the fourth year and draw on material studies in earlier years of the program. Students will participate in interprofessional education (IPE) modules with students from other health related programs when such modules are available.

CO: all Academic Term 7 Pharmacy courses  
CR: the former PHAR 5150  
LC: 0  
OR: practical sessions 3 hours per week; tutorials 1 hour per week; attendance is required  
UL: applicable only to the Bachelor of Science (Pharmacy) program 1

**5815 Pharmacology III** is the final course in the series that focuses on the pharmacological basis of the action of drugs leading to therapeutic effects, as well as adverse effects. Topics may include drugs used in the management of oncological, mental health, and neurological conditions as well as drugs of abuse.

CH: 2  
CO: PHAR 5270  
LH: 2  
PR: PHAR 4810

**5830 Applied Pharmacokinetics** discusses pharmacokinetic principles of drug selection, dosing, and monitoring in the clinical setting for individualization of drug therapy.

CH: 2  
LH: 2  
PR: PHAR 4820

**5901 Pharmaceutical Care I** discusses the pharmacotherapeutic management of common diseases and effective management of patient's drug therapy. The focus will be on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy, and safety. Emphasis will be placed on diseases of the cardiovascular system.

PR: PHAR 4810  
UL: applicable only to the Doctor of Pharmacy for Working Professionals

**5902 Pharmaceutical Care II** discusses the pharmacotherapeutic management of common diseases and effective management of patient's drug therapy. The focus will be on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy, and safety. Emphasis will be placed on diseases of the renal and digestive systems.

PR: PHAR 4810  
UL: applicable only to the Doctor of Pharmacy for Working Professionals

**5903 Pharmaceutical Care III** discusses the pharmacotherapeutic management of common diseases and effective management of patient's drug therapy. The focus will be on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy, and safety. Emphasis will be placed on disorders of the protective, structural, and endocrine systems.

PR: PHAR 4810  
UL: applicable only to the Doctor of Pharmacy for Working Professionals

**5904 Pharmaceutical Care IV** discusses the pharmacotherapeutic management of common diseases and effective management of patient's drug therapy. The focus will be on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy and safety. Emphasis will be placed on respiratory disorders and infectious diseases.

PR: PHAR 4810

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**5905 Pharmaceutical Care V** discusses the pharmacotherapeutic management of common diseases and effective management of patient's drug therapy. The focus will be on identifying drug therapy problems, establishing therapeutic outcomes, recommending pharmacological and non-pharmacological therapeutic alternatives, developing individualized therapeutic regimens, and developing a monitoring plan to evaluate adherence, efficacy, and safety. Emphasis will be placed on neurological disorders and mental health conditions.

PR: PHAR 4810

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**5920 Applied Learning II: Medication Safety and Evaluation** focuses on the principles of medication safety, medication use evaluation, adverse drug events, and medication errors and incident reporting. Students will demonstrate their learning through the completion of applied learning activities at their practice sites.

PR: PHAR 4810 and at least one of PHAR 5901, 5902, 5903, 5904, 5905

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**605P Advanced Pharmacy Practice Experience: Direct Patient Care** is an eight week (320 hours) practice experience completed during the final year of the program (following Academic Term 11). Students will be expected to demonstrate leadership in the responsible provision of patient care by becoming an integral member of the healthcare team while confidently using clinical reasoning and critical thinking skills. Mentorship of junior students may be a component of this experience.

AR: attendance is required

CH: 12

PR: all Academic Term 10 &amp; 11 courses

**606P Advanced Pharmacy Practice Experience: Acute Care Hospital** is an eight week (320 hours) practice experience where patient care is provided in an acute care hospital setting and is completed during the final year of the program (following Academic Term 11). Students will be expected to demonstrate leadership in the responsible provision of patient care by becoming an integral member of the healthcare team while confidently using clinical reasoning and critical thinking skills. Mentorship of junior students may be a component of this experience.

AR: attendance is required

CH: 12

PR: all Academic Term 10 &amp; 11 courses

**607P Advanced Pharmacy Practice Experience: Community Pharmacy** is an eight week (320 hours) practice experience where patient care is provided in a community pharmacy setting and is completed during the final year of the program (following Academic Term 11). Students will be expected to demonstrate leadership in the responsible provision of patient care by applying expanded scope of practice skills, as well as communicating and collaborating with patients, the pharmacy team, other health professionals, and the public while confidently using clinical reasoning and critical thinking skills. Mentorship of junior students may be a component of this experience.

AR: attendance is required

CH: 12

PR: all Academic Term 10 &amp; 11 courses

**608P Advanced Pharmacy Practice Experience: Elective** is a six week (240 hours) experience completed during the final year of the program

(following Academic Term 11). The experience may occur in either a direct or non-direct patient care setting. Options include patient care, research, health policy, drug information, teaching/education, advocacy, and administration. Placements may vary from year to year depending upon site and preceptor availability.

AR: attendance is required

CH: 9

PR: all Academic Term 10 &amp; 11 courses

**610P Advanced Pharmacy Practice Experience: Ambulatory Care** is a six week (240 hours) practice experience completed during the final year of the program. Students will develop their medication therapy management skills and pharmaceutical care in an ambulatory care setting. Students will be expected to demonstrate leadership in the responsible provision of patient care by becoming an integral member of the healthcare team while confidently using clinical reasoning and critical thinking skills. Mentorship of junior students may be a component of this experience.

AR: attendance is required

CH: 9

PR: PHAR 6900, 6930 and at least four of PHAR 5901, 5902, 5903, 5904, 5905

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**611P Advanced Pharmacy Practice Experience: Inpatient Care** is a six week (240 hours) practice experience completed during the final year of the program. Students will develop the essential skills necessary to provide direct patient care in an inpatient setting. Students will be expected to demonstrate leadership in the responsible provision of patient care by becoming an integral member of the healthcare team while confidently using clinical reasoning and critical thinking skills. Mentorship of junior students may be a component of this experience.

AR: attendance is required

CH: 9

PR: PHAR 6900, 6930 and at least four of PHAR 5901, 5902, 5903, 5904, 5905

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**6900 Clinical Skills II** is an on-campus, three-day (21 hours) introduction to the Advanced Pharmacy Practice Experience component of the program. Topics may include motivational interviewing, intraprofessional and interprofessional collaboration, documentation, and expanded scope of pharmacy practice. Students will continue to demonstrate skills in communication, physical assessment, and documentation. This course may commence beyond the semester start date.

AR: attendance is required

CH: 9

CO: PHAR 6930

PR: PHAR 4900

UL: applicable only to the Doctor of Pharmacy for Working Professionals

**6930 Applied Learning III: Pharmaceutical Care and Interprofessional Collaboration** focuses on the expansion of skills in physical assessment, communication, documentation, teamwork, and interprofessional collaboration through the pharmaceutical care process. Students will demonstrate their learning through the completion of applied learning activities at their practice sites.

CO: PHAR 6930

PR: PHAR 5920 and at least three of PHAR 5901, 5902, 5903, 5904, 5905

UL: applicable only to the Doctor of Pharmacy for Working Professionals