OVERVIEW

**Specialization Electives** in the BScPharm program are a core component of the BScPharm degree program allowing students to pursue further learning in areas related to pharmacy or topics complimentary to pharmacy practice roles. For instance, courses are available to support students interested in pharmacy management (see PHARM 494) or practice in geriatrics (see SOC 375 or DRAMA 407). Students are required to complete three specialization electives (9 credits) usually in the fourth year of the program. Transfer credit is not accepted for Specialization Electives as they must be University of Alberta courses. There are also four **Options** courses in the BScPharm program: year one (3 credits), year three (3 credits) and year four (6 credits). Options are normally selected from courses outside of the Faculty of Pharmacy and Pharmaceutical Sciences and allow students to pursue **areas of personal interest** and promote a liberal education. Transfer credit is accepted for Options. See University of Alberta Calendar Section [Program of Courses](#).

CHOOSING COURSES

Specialization Electives are ideally selected from courses offered by the Faculty of Pharmacy and Pharmaceutical Sciences. At the present time, students are required to take at least 3 credits from the Faculty of Pharmacy and Pharmaceutical Sciences (one course). Students are encouraged to speak with their Faculty Advisor or to Student Services about questions regarding choice of specialization electives. For information about specific courses, students are encouraged to approach the course coordinators with their questions.

Students are encouraged to register early for courses. Please note that some courses have minimum enrolment numbers therefore enrolling and withdrawing from a Pharmacy course near the registration deadline may adversely affect planning for interdisciplinary group-work in the course (e.g. PHARM 452) or necessitate cancellation of the course (e.g. PHARM 494).

APPROVED SPECIALIZATION ELECTIVES

The courses offered as specialization electives serve the purpose of furthering your understanding as well as, in some instances, offering you opportunities to focus learning in an area related to roles of pharmacists. A list of specialization electives including courses offered by other Faculties approved by the Curriculum Committee is updated and posted on the Faculty’s website each year. If a student identifies another course as a specialization elective, please submit a request, including justification as to why it should be considered, to Dr. Dion Brocks (dbrocks@ualberta.ca).

This document lists courses approved as Specialization Electives for fourth-year Pharmacy students. Courses are organized in two ways: 1) Courses and 2) Roles (see Association of Faculties of Pharmacy of Canada (AFPC) Educational Outcomes for Pharmacy programs)\(^1\). Many courses address more than one role or educational outcome of the program; the most prominent role was identified for this listing. For more information about specific courses, please refer to the University of Alberta Calendar section 231 for course description including pre-requisites and Bear Tracks for course availability. Students are encouraged to contact the instructor for additional information about a course. Please see *notes for additional information on some of the courses listed and *eligibility for credit toward the Certificate in Global Citizenship.

## LISTED BY COURSE

### PHARMACY COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHARM 452</td>
<td>Pharmacy Practice - Design and Function</td>
<td>first term</td>
</tr>
<tr>
<td>PHARM 455</td>
<td>Specialty Pharmacy Rotation</td>
<td>either term</td>
</tr>
<tr>
<td>PHARM 489</td>
<td>Seminars in Therapeutics and Professional Practice</td>
<td>either term</td>
</tr>
<tr>
<td>PHARM 494</td>
<td>Pharmacy Management: Selected Topics</td>
<td>second term</td>
</tr>
<tr>
<td>PHARM 498</td>
<td>Research and Directed Studies</td>
<td>either term</td>
</tr>
<tr>
<td>PHARM 570</td>
<td>Advanced Pharmaceutical Analysis - Spectroscopy</td>
<td>either term</td>
</tr>
<tr>
<td>PHARM 573</td>
<td>Analytical Techniques in Pharmaceutical Sciences</td>
<td>either term</td>
</tr>
<tr>
<td>ONCOL 475/575</td>
<td>Fundamentals of Radiopharmaceutical Sciences</td>
<td>either term or Spring/Summer</td>
</tr>
</tbody>
</table>

*The following International courses require consent of Faculty for registration*

- **PHARM 453** Intercultural Exploration of Pharmacy and Health – Italy – Spring term
- **INT D 457** Global Health – China Collaboration – Spring/Summer term
- **INT D 375** Intercultural Exploration of Health and Practice in Italy - Spring/Summer term

### COURSES OFFERED BY OTHER FACULTIES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACCTG 300</strong></td>
<td>Introduction to Accounting</td>
<td>either term</td>
</tr>
<tr>
<td><em>ANTHR 393</em></td>
<td>Health and Healing</td>
<td>either term</td>
</tr>
<tr>
<td>ANAT 400</td>
<td>Human Embryonic Development</td>
<td>first term</td>
</tr>
<tr>
<td>ASL 111</td>
<td>Beginners’ American Sign Language I</td>
<td>either term</td>
</tr>
<tr>
<td><strong>B LAW 301</strong></td>
<td>Legal Foundations of the Canadian Economy</td>
<td>either term</td>
</tr>
<tr>
<td>BIOCH 450</td>
<td>The Molecular Biology of Mammalian Viruses</td>
<td>either term</td>
</tr>
<tr>
<td>BOT 380</td>
<td>Drug Plants</td>
<td>second term</td>
</tr>
<tr>
<td>BUS 640</td>
<td>Strategic Supply Chain Management</td>
<td>either term</td>
</tr>
<tr>
<td>CELL 300</td>
<td>Advanced Cell Biology I</td>
<td>first term</td>
</tr>
<tr>
<td>CLASS 375</td>
<td>History of Medicine in the Ancient World</td>
<td>either term</td>
</tr>
<tr>
<td><em>CSL 300</em></td>
<td>Theory and Practice in Community Service-Learning</td>
<td>either term</td>
</tr>
<tr>
<td><em>CSL 480</em></td>
<td>Individual Study in Community Service-Learning –Variable</td>
<td></td>
</tr>
<tr>
<td>DRAMA 407</td>
<td>Studies in Drama II</td>
<td>either term</td>
</tr>
<tr>
<td>DRAMA 507</td>
<td>Senior Projects</td>
<td>either term</td>
</tr>
<tr>
<td>HE ED 320</td>
<td>Social Dimensions of Health Promotion</td>
<td>either term</td>
</tr>
<tr>
<td>HECOL 414</td>
<td>Seniors and Their Environments</td>
<td>either term</td>
</tr>
<tr>
<td><em>INT D 404</em></td>
<td>Global Citizenship Contemporary Issues &amp; Perspectives</td>
<td>either term</td>
</tr>
<tr>
<td><em>INT D 411</em></td>
<td>Advanced Interprofessional Team Practice</td>
<td>either term</td>
</tr>
<tr>
<td>NEURO 410</td>
<td>Neurobiology of Aging and Neurodegenerative Disorders</td>
<td>second term</td>
</tr>
<tr>
<td>NU FS 305</td>
<td>Introduction to the Principles of Nutrition</td>
<td>first term</td>
</tr>
<tr>
<td>NU FS 356</td>
<td>Nutrition Across the Lifespan</td>
<td>second term</td>
</tr>
<tr>
<td>NU FS 427</td>
<td>Food Safety</td>
<td>first term</td>
</tr>
<tr>
<td><em>NURS 498</em></td>
<td>Special Study</td>
<td>variable two term</td>
</tr>
<tr>
<td>NUTR 380</td>
<td>Sports Nutrition</td>
<td>second term</td>
</tr>
<tr>
<td>ONCOL 320</td>
<td>Introduction to Oncology</td>
<td>first term</td>
</tr>
<tr>
<td>ONCOL 424</td>
<td>Nutrition and Metabolism Related to Cancer</td>
<td>first term</td>
</tr>
<tr>
<td>PHIL 386</td>
<td>Health Care Ethics</td>
<td>either term</td>
</tr>
<tr>
<td><em>PMCOL 305</em></td>
<td>An Introduction to the Pharmacology of Drug Abuse</td>
<td>either term</td>
</tr>
<tr>
<td>PMCOL 371</td>
<td>Cellular Neuroscience</td>
<td>first term</td>
</tr>
</tbody>
</table>

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Notes:
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Students are responsible to ensure that all pre-requisites are met prior to registration. Refer to University of Alberta Calendar Course Listings or contact the Department.

*Courses approved for credit toward the Certificate in Global Citizenship, Faculty of Education.
*Pre-requisites for pharmacology courses (PMCOL) on this list may be waived by the Department of Pharmacology for pharmacy students. Please contact the Department of Pharmacology or the Course Coordinator prior to registration.
**SMO 301, ACCTG 300, and B LAW 301 - Other course fees are associated with these courses. Please consult the Department regarding fees.

LISTED BY ROLES

Care Provider: Pharmacy graduates use their knowledge, skills and professional judgement to provide pharmaceutical care and to facilitate management of patient’s medication and overall health needs.

PHARM 455 Specialty Pharmacy Rotation
PHARM 489 Seminars in Therapeutics and Professional Practice
*ANTHR 393 Health and Healing
INT D 411 Advanced Interprofessional Team Practice
NU FS 305 Introduction to the Principles of Nutrition
NU FS 356 Nutrition Across the Lifespan
NU FS 427 Food Safety
NUTR 380 Sports Nutrition
PHIL 386 Health Care Ethics
PTHER 350 Structural Human Anatomy
PTHER 351 Principles of Human Movement for Rehabilitation
PSYCO 377 Human Neuropsychology
**Communicator:** Pharmacy graduates communicate with diverse audiences, using a variety of strategies that take into account the situation, intended outcomes of the communication and the target audience.

- PHARM 453 Intercultural Exploration of Pharmacy and Health, Italy
- ANTHR 393 Health and Healing
- DRAMA 407/507 Senior Projects
- ASL 111 Beginners’ American Sign Language I
- *INT D 375 Intercultural Exploration of Health and Practice in Italy

**Collaborator:** Pharmacy graduates work collaboratively with teams to provide effective, quality health care and to fulfill their professional obligations to the community and society at large.

- PHARM 452 Pharmacy Practice - Design and Function
- DRAMA 407/507 Senior Projects
- INT D 411 Advanced Interprofessional Team Practice
- *INT D 457 Global Health – China Collaboration

**Manager:** Pharmacy graduates use management skills in their daily practice to optimize the care of patients, to ensure the safe and effective distribution of medications, and to make efficient use of health resources.

- PHARM 494 Pharmacy Management: Selected Topics
- **ACCTG 300 Introduction to Accounting**
- BUS 640 Strategic Supply Chain Management
- **B LAW 301 Legal Foundations of the Canadian Economy**
- **SMO 301 Behavior in Organizations**

**Advocate:** Pharmacy graduates use their expertise and influence to advance the health and well-being of individual patients, communities, and populations, and to support pharmacist’s professional roles.

- PHARM 453 Intercultural Exploration of Pharmacy and Health, Italy
- ANTHR 393 Health and Healing
- CLASS 375 History of Medicine in the Ancient World
- *CSL 300 Theory and Practice in Community Service-Learning*
- *CSL 480 Individual Study in Community Service-Learning*
- DRAMA 407 Studies in Drama II
- DRAMA 507 Senior Projects
- HE ED 320 Social Dimensions of Health Promotion
- HECOL 414 Seniors and Their Environments
- *INT D 404 Global Citizenship Contemporary Issues & Perspectives*
- *INT D 375 Intercultural Exploration of Health and Practice in Italy*
- NURS 498 Global Citizenship in Health
- PHIL 386 Philosophy and Health Care Information term SOC 375 Sociology of Aging
- SOC 382 Sociology of Health and Illness term SOC
- 451 Sociology of Human Fertility
term SOC 452 Mortality and Population Health-
SOC 473 Sociology of Death and Dying
SOC 486 Sociology of Mental Illness

Scholar: Pharmacy graduates have and can apply the core knowledge and skills required to be a medication therapy expert, and are able to master, generate, interpret and disseminate pharmaceutical and pharmacy practice knowledge.

PHARM 498 Research and Directed Studies
PHARM 570 Advanced Pharmaceutical Analysis – Spectroscopy
PHARM 573 Analytical Techniques in Pharmaceutical Sciences
ANAT 400 Human Embryonic Development
BIOCH 450 The Molecular Biology of Mammalian Viruses
BOT 380 Drug Plants
CELL 300 Advanced Cell Biology I
NEURO 410 Neurobiology of Aging and Neurodegenerative Disorders
ONCOL 320 Introduction to Oncology
ONCOL 424 Nutrition and Metabolism Related to Cancer
ONCOL 475/575 Fundamentals of Radiopharmaceutical Sciences – either term or Spring/Summer
*PMCOL 305 An Introduction to the Pharmacology of Drug Abuse
PMCOL 371 Cellular Neuroscience
*PMCOL 412 Drugs and the Nervous System
*PMCOL 415 Cardiovascular Pharmacology
*PMCOL 416 Current Topics in Endocrine Pharmacology
PSYCO 377 Human Neuropsychology

Professional: Pharmacy graduates honour their roles as self-regulated professionals through both individual patient care and fulfillment of their professional obligations to the profession, the community and society at large.

PHARM 455 Specialty Pharmacy Rotation

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