COLLEGE OF PHARMACY AND NUTRITION

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FACULTY AND ACADEMIC STAFF

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L. G. Suveges, Assistant Dean of Pharmacy and Nutrition (Undergraduate Affairs)

S. J. Whiting, Assistant Dean of Pharmacy and Nutrition (Research)

R. G. Kachanoski, Dean of Graduate Studies and Research

F. Winter, Director of Libraries

G. Barnhart, University Secretary

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DIVISION OF PHARMACY

Professor and Head

A. J. Remillard

Professors

J. R. Dimmock, M. Foldvari, D. K. J. Gorecki, J. W. Hubbard, G. McKay, Y. M. Shevchuk, L. G. Suveges

Associate Professors

A. J. Nazarali, J. G. Taylor

Assistant Professors

J. Alcorn, B. E. Allen, R. T. Dobson, S. L. Neubauer

Associate Members

E. D. Korchinski, K. Sankaran

Adjunct Professors*

M. Baca-Estrada, K. K. Midha

Clinical Assistant Professors*

P. Calissi, B. Evans, M. Gaucher, P. S. Melnyk, C. J. Richardson, W. Semchuk, B. J. Thiessen

Clinical Instructors*

R. Amaya, C. Anderson, L. Appelt, D. Ast, S. Bayne, C. Beeharry, S. Belyk, E. Berezowski, P. Buchanan, J. Burgess, C. Carruthers, J. Chupa, L. Churko, J. Cochrane, M. Davis, D. Derbowka, T. Franklin, L. Friesen, G. Furneaux, L. Gerbrandt, J. Giesbrecht, D. Grondin, G. Groves, G. Guedo, K. Gunn, N. Harman, D. K. Hargreaves, K. Hargreaves, H. Hay, K. Herman, G. Hladun, P. Holden, J. Hudson, S. Ireland, D. Johnson, E. Kachur, S. Kolitsas, A. Kuntz, L. LeBere, C. Lewchuk, Y. Linnen, C. Loucks, B. Lyons, C. S. Mack-Klinger, R. Mack, C. MacWilliam, J. M. Markowski, K. McDermaid, W. McDonald, C. McKenzie, A. Miller, J. Mullock, L. Nagy, B. Ogrodnick, B. Pateman, B. Pearson, K. Pereverzoff, T. Petrychko, A. Pidkowich, G. Pilsner, B. Pomedli, R. Priddel, S. Poulin, J. Purvis, M. Quesnel, L. Rhode, S. Robertson, D. Rodenbush, S. Ryma, E. Schultz, B. Schuster, C. Semenchuk, D. Sereda, M. Shanofer, K. Smith, C. Soron, R. Stewart, G. Stueck, L. Sulz, B. Surjik, S. Szabo, N. Voelk, A. Wahler, C. Walker, D. Walter B. Wenger, C. Wilken, S. Woloshyn

DIVISION OF NUTRITION AND DIETETICS

Associate Professor and Head

S. L. Berenbaum

Professors

A. M. Stephen, S. J. Whiting

Associate Professors

P. G. Paterson, G. A. Zello

Assistant Professor

C. J. Henry

Associate Member

K. Chad

Clinical Assistant Professor*

S. M. Mahaffey

Clinical Instructor*

R. L. Bourgeois

MEMBERS FROM OTHER FACULTIES

A. M. Backman, Assistant Professor of Management and Marketing

P. M. Bidwell, Assistant Professor and Head of English

J. R. Doucette, Professor of Anatomy and Cell Biology

P. M. Dowling, Associate Professor of Veterinary Physiological Sciences

T. H. J. Gilmour, Professor of Biology

R. L. Khandelwal, Professor of Biochemistry

K. L. Massey, Professor of Pathology

L. F. Qualtiere, Professor of Microbiology and Immunology

B. A. Reeder, Professor of Community Health and Epidemiology

J. S. Richardson, Professor of Pharmacology and Associate Member in Psychiatry

P. J. Shand, Assistant Professor of Applied Microbiology and Food Science

M. P. Singh, Assistant Professor of Chemistry

P. A. Thacker, Professor of Animal and Poultry Science

W. Walz, Professor and Head of Physiology

* Denotes non-members of faculty.

SASKATCHEWAN PHARMACY

An Act passed in 1892 established the North West Territories Pharmaceutical Association as a legal and professional body. This act included the governing of Pharmacy in the territory now defined as Saskatchewan.

The Province of Saskatchewan was formed in 1905; however, pharmacy in Saskatchewan continued to be administered under the Act of the North West Territories Pharmaceutical Association until 1911 when the Saskatchewan Pharmaceutical Association was formed.

The Canadian Pharmaceutical Association was formed in 1907 to deal with all aspects of Pharmacy on a national level.

In 1913 the School of Pharmacy, University of Saskatchewan, was organized under the directorship of Alexander Campbell. In 1921 the School became the College of Pharmacy and in 1946 the minimum educational requirement to be registered as a pharmacist in Saskatchewan was set at four years at the university, and graduation with the degree of Bachelor of Science in Pharmacy.

In 1987, the Bachelor of Science in Pharmacy program was revised and one year of university training is now required prior to admission to the four-year Pharmacy program.

In 1994, the name of the college was changed to the College of Pharmacy and Nutrition.

PHARMACY PROGRAMS

DEGREE PROGRAM

The university offers a four-year program leading to the degree of Bachelor of Science in Pharmacy (B.S.P.). Students must have completed a minimum of one year (30 credit units) of university courses to be considered for admission. This program prepares students to enter community pharmacy, hospital pharmacy, industrial pharmacy, or postgraduate study.

To receive a degree in Pharmacy from the University of Saskatchewan, a student must have completed at least 39 credit units of Pharmacy courses (carrying PHARM label) at this institution. In the case of students wishing to receive credit for courses taken at another College/Faculty of Pharmacy, courses will be reviewed individually to determine if credit will be granted. Students will be responsible for providing adequate information to allow proper review of course content. Students transferring into the Pharmacy program must take the course in Pharmacy Law offered at this institution as a prerequisite for clerkship courses.

SECOND DEGREES

Students in the College of Pharmacy and Nutrition who wish to complete their studies toward the Bachelor of Arts or the Bachelor of Science in addition to the Bachelor of Science in Pharmacy are advised to consult the Office of the Dean of Arts and Science to determine the precise requirements.

GRADUATE STUDY IN PHARMACY

A recipient of a Bachelor of Science in Pharmacy, who has obtained a sufficiently high standing in the four-year degree program, may apply to the College of Graduate Studies and Research and proceed to the degree of Master of Science and to a Doctor of Philosophy degree. The College of Pharmacy and Nutrition offers programs of study in clinical pharmacy and the pharmaceutical sciences - medicinal chemistry, pharmaceutics, pharmaceutical chemistry, biopharmaceutics/ pharmacokinetics, molecular biology/biotechnology, toxicology, pharmacoepidemiology and pharmacoeconomics. See the College of Graduate Studies and Research section of the *Calendar.*

INTERNSHIP

Students registered in the Bachelor of Science in Pharmacy program must register as interns with the Saskatchewan Pharmaceutical Association in order to participate in the required clerkship courses.

LICENSE IN PHARMACY

The license to practice pharmacy in Saskatchewan is granted by the Saskatchewan Pharmaceutical Association to graduates of the college who have completed the required period of internship. The term of internship is 1040 hours under the direct and personal supervision of a licensed pharmacist, 700 hours of which may be served at any time following completion of the second year of the Pharmacy program at the University of Saskatchewan, and 300 hours of which must be served after completion of the program leading to a degree in Pharmacy from the University of Saskatchewan.

Candidates, who have graduated from recognized colleges outside of Saskatchewan, must apply for licensure to the Saskatchewan Pharmaceutical Association.

The Board of Examiners of the Saskatchewan Pharmaceutical Association is listed under the Professional Societies section of the *Calendar.*

PHARMACY EXAMINING BOARD OF CANADA

Graduates of this university having the degree of Bachelor of Science in Pharmacy may apply to write the Qualifying Examinations of the Pharmacy Examining Board of Canada. Passing of the examinations set by the Pharmacy Examining Board will satisfy the academic requirement of the other provincial pharmacy licensing bodies which participate in the P.E.B.C.

ADMISSION REQUIREMENTS 2001

Applicants planning to enter Pharmacy should have an interest in health and be committed to helping those who are suffering from illness. Developing skills in

critical thinking, reading and writing, and communicating with patients and other health practitioners is an important part of pharmacy education. The ability to be precise and careful with details is also essential.

For admission to the B.S.P. program in the College of Pharmacy and Nutrition, an applicant must have successfully completed, with a minimum weighted average of 70%, 30 credit units in the College of Arts and Science at the University of Saskatchewan or its equivalent on or before April 30 in the year in which they wish to be considered for admission. The 30 credit units should include the following courses or their equivalents:

(1) BIOL 110.6

(2) CHEM 111.3

(3) CHEM 251.3

(4) ENG 110.6 or LIT 100.6 or FR 121.3 (or 122.3) and 125.3

(5) Electives (12 credit units of courses in humanities, social sciences or fine arts of which 6 credit units must be one of Psychology 110.6, Sociology 110.6, Philosophy 110.6 [or Philosophy 120.3 and 133.3], or Native Studies 110.6).

Students may be admitted with a deficiency in six credit units of elective courses if courses from the first year of Pharmacy have been completed, e.g. Nutrition 120.3, Biochemistry 200.3. Any deficiency must be made up prior to entry into the second year of the Pharmacy program.

In order to enrol in the Arts and Science courses of the pre-Pharmacy year, the student must have senior matriculation standing in English A30 and English B30 (or, beginning in 2000, for applicants who complete the Fransaskois or French Immersion programs, English A30 and one other 30-level language arts subject), Biology 30, Chemistry 30, Mathematics B30 and C30 (or, under the old mathematics curriculum, Algebra 30 and Geometry-Trigonometry 30).

Application forms for 2002-2003 will be available from the Office of the Dean of Pharmacy and Nutrition after October 1, 2001. The deadline for applications is February 1, 2002

Please note that admission will be based on post-secondary academic record (60% of the admission score), critical thinking skills essay (30%) and personal profile (10%). Detailed information regarding these criteria and the admission process is available from the College of Pharmacy and Nutrition.

TRANSFER CREDITS

Students with transfer credits will be considered for admission to the B.S.P. program if, during their previous program, they have credit for courses required in the pre-pharmacy year.

Students who have previously been enrolled in the College of Pharmacy and Nutrition, and are returning to complete degree requirements, must apply for re-admission and also contact the Office of the Dean to establish a program.

ADMISSION OF ABORIGINAL APPLICANTS

(Saskatchewan Residents Only)

Two first-year spaces are reserved for persons of Aboriginal descent. Applicants will be required to complete the courses of the pre-pharmacy year and obtain a cumulative average of at least 70% or higher on University courses completed. Applicants of Aboriginal descent will compete within this category, not against the entire applicant pool. Applicants should identify themselves on the application for admission if they wish to be considered in this admission category.

BACHELOR OF SCIENCE IN PHARMACY

The revised B.S.P. program was implemented in September 2000. All students admitted to the Pharmacy program in September 1999 and September 2000 will complete the program listed below. Students who were admitted prior to 1999 and who have continued in the program must complete the requirements under **B.S.P. Program (Prior to 2000)** listed following this section. Students returning to the program following a year or more's absence from the program must contact the Office of the Dean to establish a program.

B.S.P. PROGRAM (2000)

First Year

CHEM 252.3; BIOCH 200.3; BIOCH 211.3; HSC 208.6; PHARM 200.1; PHARM 201.5; PHARM 203.5; PHARM 216.2; PHARM. 280.2; NUTR 120.3; MATH 110.3

Second Year

MICRO 224.3; PATH 205.3; PHCOL 350.6; PHARM 300.1; PHARM 303.4; PHARM 307.2; PHARM 365.5; PHARM 372.2; PHARM 380.4; STATS 246.3; Elective (3 credit units)

Third Year

PHARM 400.1; PHARM 408.3; PHARM 409.3; PHARM 417.4; PHARM 418.2; PHARM 455.7; PHARM 456.7; PHARM 465.2; PHARM 472.2; PHARM 480.4

Fourth Year

PHARM 500.1; PHARM 518.2; PHARM 557.6; PHARM 565.2; PHARM 580.16; Electives (6 credit units of PHARM)

B.S.P. PROGRAM (PRIOR TO 2000)

First Year

ANAT 105.3; CHEM 252.3; MICRO 224.3; PHARM 240.6; PHARM 260.3; PHSIO 212.6; Electives (9 credit units)

Second Year

BIOCH 200.3. BIOCH 211.3; PATH 205.3; PHARM 330.6; PHARM 331.3; PHARM 340.3; PHARM 352.3; PHARM 366.3; PHARM 364.3; Electives (6 credit units)

Third Year

PHCOL 350.6; PHARM 410.3; PHARM 420.3; PHARM 432.6; PHARM 442.4; PHARM 464.4; Electives (6 credit units)

Fourth Year

PHARM 550.6; PHARM 552.3; PHARM 560.6; PHARM 562.2; PHARM 564.2; Electives (12 credit units)

ELECTIVES

Electives must be approved by the College of Pharmacy and Nutrition. The total program for the year prior to entry and the four years in the College of Pharmacy and Nutrition must include at least 6 credit units of pharmacy electives and at least 18 credit units of non-science courses (i.e., 6 credit units of English, which should have been completed prior to entry into the college, and elective courses in the areas of the humanities, social sciences or fine arts). Students are encouraged to select a course in the social sciences as one of their electives.

Students entering the Pharmacy program with more than one year of previous university training may transfer credit for up to 21 credit units of approved electives. Twelve credit units of electives, in the B.S.P. program, must be completed while registered in the College of Pharmacy and Nutrition.

Students will not be allowed to take courses numbered 500 or above except in the fourth year of their Pharmacy program (unless specific permission of the instructor is obtained).

NUMBER OF 100-LEVEL COURSES

Not more than 24 credit units of 100-level courses (i.e., ANAT 105.3 and 21 other credit units) are to be included in the four-year program in Pharmacy.

FIRST AID AND CPR CERTIFICATES

Students must complete an extramural course in first aid and cardiopulmonary resuscitation during the Pharmacy program. At the time of graduation, each student must hold a valid Class A First Aid Certificate, and must have been certified for CPR (Level C) by the Heart Foundation within the 12 months prior to graduation. Courses in First Aid (from the St. John Ambulance Association) and CPR (from the College of Kinesiology) will be made available to students during their third (First Aid) and fourth (CPR) years of the pharmacy program. Students may take these courses in the summer if certified courses are available to them. A student who already holds a valid certificate for either of these programs must present the certificate so a copy can be placed in their student record.

PUBLIC SPEAKING CERTIFICATE

Students must complete an extramural course in public speaking during their Pharmacy program. A "Speechcraft" course (arranged through the Saskatoon Toastmasters' Clubs) will be made available to students during their second year of the Pharmacy program. A student who holds a valid certificate indicating training in public speaking must present the certificate and appropriate course information for consideration and entry into the student record.

STANDARDS OF ACADEMIC PERFORMANCE

Candidates for a degree are required to obtain an annual weighted average of 60%, and have no more than two failures in the Regular Session in each year or the student will be required to discontinue the program in Pharmacy. Students who do not meet the requirements in their graduating year will be dealt with on an individual basis. The annual weighted average is based on courses taken during the regular session (September-April) and Spring and Summer Session immediately prior to this. Credit units indicate the relative academic weight of each course and are used to calculate the weighted average.

The following regulations should also be noted for the B.S.P. program:

- All admission deficiencies must be removed before a student will be allowed to register in the second year.
- A student in the first year of the program may not take second-year compulsory courses.
- A student, who chooses to split either the second or third year of the program, must take a minimum of 15 credit units of required courses in each year of the split or receive special permission to take fewer than the number of required credit units.
- A student must have completed all required courses of the third year of the program prior to registration in fourth year.
- Students may not, at any time, register in courses with a timetable conflict.
- A student wishing to graduate must complete the courses for the degree within a seven year period after first registration in the program. In exceptional circumstances permission may be granted to continue study beyond the seven year limit. The students must meet the degree requirements in place when the extension is granted.
- A student may be required to withdraw from the program in Pharmacy for reasons other than academic ones.
- Any application from a prospective student who has been *Required to Discontinue* more than once will not be approved except in extreme circumstances.
- Students required to discontinue are permitted to apply for admission to another program or as an unclassified student at this university or any other accredited post-secondary institution, for study during the year that the faculty action is in place (called the period of rustication), except when the faculty action is a matter of academic or non-academic discipline. Such applications are considered on a case by case basis by the program to which the student is applying. Students who are required to discontinue and have served the period of rustication without taking any credit courses from this or any other accredited post-secondary institution will

be readmitted to the program, on application, provided that there is space in the year to which they are applying to return. Students who are required to discontinue, but who have taken classes here or elsewhere during the period of rustication, will be readmitted, on application, provided that their average in the classes taken meets the promotion standard for the college and provided that there is space in the year to which they are applying to return. Students who take courses during the period of rustication and are readmitted will be given credit, according to college policies, for these courses toward their program.

• A more complete description of academic requirements, including promotion and failures, is available in the Office of the Dean of Pharmacy and Nutrition. Students should also be familiar with *The University Council Regulations on Examinations* found at the end of the General Information section of the *Calendar,* or on the web at www.usask.ca/registrar/Current_Calendar/examregs/.

For information on *College Regulations on Examinations*, students are referred to the college office.

Regulations on student appeals and academic dishonesty are on the web at www.usask.ca/university_council/reports/shtml

DEAN'S HONOUR ROLL

To be included on the Dean's Honour Roll, a student must have a sessional weighted average of 80% or greater and must have completed a minimum of 30 credit units in the Regular Session.

DEGREE WITH DISTINCTION

Beginning with Spring Convocation 2000, students whose cumulative weighted averages are higher than 1.25 standard deviations above the mean of the average of their class and who also obtain minimum cumulative weighted averages of 80.00% will receive the degree with Great Distinction. Students whose cumulative weighted averages are between .50 and 1.25 standard deviations above the mean of the average for their class and who also obtain minimum cumulative weighted averages of 75.00% will receive the degree with Distinction. Students' averages are calculated from the grades obtained on all courses taken to complete degree requirements, including failures.

SCHOLARSHIPS AND AWARDS

Scholarships and prizes which are open only to students in the B.S.P. program are listed below:

Aventis Pharma Inc. Book Award in Law and Ethics..$100
C.Ph.A./Apotex - P.A.C.E. Future Leader Award $1,000
P.A.C.E./Apotex Bursaries (two), Each.....$750
Elaine Atkinson Memorial Bursary.....$250
Rose Baru Prize (for dispensing) $80
Bristol-Myers Squibb Pharmacy Award $500
George A. Hamilton Scholarship.....$1,115
Saskatoon Pharmacists' Society Entrance Scholarship $400
Boehringer Ingelheim (Canada) Ltd. Pharmacy Award$500
Campbell Prize (second most distinguished graduating student) $150
Carter-Horner Award .....(book)
Class of '56 Memorial Scholarship.....$500
Class of '59 Pharmacy Award $400
Ronald Currie Award.....$500
Mark C. Falloon Book Prize.....(book)
Robert A. (Bob) Forrest/Glaxo Book Award.....$500
Charles E. Frosst Medal and Scholarship (student entering final year).....$1,000
Hoffman-LaRoche Scholarship in Pharmacy.....$750
Dorothy E. Homstol Memorial Scholarship.....$650
Chandra Khandelwal Memorial Scholarship $500
Don Klatt Memorial Prize.....$250
James A. Lackey Bursary $550
Eli Lilly Book Award (book) $200
Dean W. C. MacAulay Memorial Bursaries (nine) each $400
Doreen Machula Memorial Award.....$250
Robert Martin Prize (most distinguished graduating student) $250
Merck, Sharp & Dohme Scholarship (books) $1,000
Della Morgan Bursary in Pharmacy $1,300
Medis Health and Pharmaceutical Services Scholarship (3rd year).....$600
Novopharm Awards (two) each $500
Orest Buchko Hospital Pharmacy Award.....$500
Pereverzoff Prize (4th year) $750
Pernarowski Scholarship $200
Pfizer Award.....$500
Pharmacy Students' Society Awards (presented by the Society) (six) Each.....$40
Plainsmen Bursary (for a worthy student in financial need) $750
Saskatchewan Pharmaceutical Association Bursary (two) Each.....$400
Shoppers Drug Mart Community Pharmacy Scholarships (two) Each.....$500
Ben Shore Scholarship $150
Percy Shore Memorial Scholarship $75
University Undergraduate Scholarships.....$1,000
Warner-Lambert Consumer Healthcare Drugs in Self-Medication Award.....$500
Dean E. L. Woods Memorial Bursary $400
Wyeth Award of Excellence $200
Saskatchewan Pharmaceutical Association Gold Medal (most distinguished graduating student).
Donald Zuck Family Bursary(ies) in Pharmacy $1,100

The following are open only to graduate students in Pharmacy:
F. J. Fear Scholarship.....$175
Hoescht-Roussel Canada Inc. Graduate Award $1,500
Parke-Davis Canada Centennial Pharmacy Research Fellowship $5,000
Alf Pepper Research Award.....$400

For scholarships open to all University students, including students of the College of Pharmacy and Nutrition, see the *Awards Guides.*

THE SASKATCHEWAN PHARMACY AND NUTRITION STUDENTS' SOCIETY

The Saskatchewan Pharmacy and Nutrition Students' Society (SPNSS) works to enhance knowledge of the professions related to nutrition and pharmacy and to foster good relations among their members and with other student organizations, the University and the community. They organize a variety of academic, professional, social and athletic events and activities.

FEES, PAYMENT OF FEES, CANCELLATIONS & REFUNDS, & COURSE CHANGES

See the General Information section of the *Calendar.*

In the College of Pharmacy and Nutrition, the dates by which courses may be dropped without academic penalty are as follows:

First-Term Courses - November 15
Second-Term Courses - March 15
Two-Term Courses - February 15

GRADING

See the General Information section of the *Calendar* for a full explanation of the grading system and the literal descriptors associated with percentage grades.

COURSE DESCRIPTIONS

See the General Information section of the *Calendar* for an explanation of the format used in course descriptions.

BIOCHEMISTRY

BIOCH 200.3
Molecules of Life
1(3L)

Prerequisite(s): Biology 30 or 3 credit units in Biology at the university level, and CHEM 111 and 251; CHEM 251 may be taken concurrently.

Topics include: simple and complex biomolecules, amino acids, peptides, proteins, carbohydrates, lipids, nucleic acids, coenzymes, vitamins. An introduction to the structure of biological membranes, solute transport, DNA replication, mRNA transcription and protein synthesis will be presented.

Note: Students cannot obtain credit for this course and BIOCH 203, 205 or 209.

BIOCH 211.3
Introductory Metabolism
2(3L)

Prerequisite(s): BIOCH 200 and CHEM 251.

Introduction to the thermodynamic aspects of energy metabolism and the principles of anabolic and catabolic metabolic pathways. Emphasis will be placed on the overall purposes of the major pathways, the precursor molecules leading into these pathways, important products, and the basic types of control that regulate metabolic flux.

Note: Students cannot obtain credit for this course and BIOCH 203, 205 or 209.

CHEMISTRY

CHEM 251.3
Organic Chemistry I

For details, see the College of Arts and Science section of the *Calendar.*

CHEM 252.3
Organic Chemistry II

For details, see the College of Arts and Science section of the *Calendar.*

MICROBIOLOGY

MICRO 224.3
Microbiology for Pharmacists
2(3L-3P)

Prerequisite(s): BIOL 110, CHEM 111.

Introduces students to medically-important microorganisms including bacteria, viruses, fungi, and parasites. Topics include the structure and function of microorganisms, host-pathogen interactions, immunological principles, antimicrobial agents and resistance, infection control principles, and a representative survey of medically relevant microorganisms. Laboratory exercises stress the observation, growth, and safe handling of microorganisms.

Note: Replaces MICRO 214 in the Pharmacy program (students who already have credit for MICRO 214 will not be required to take MICRO 224). Available only to students in Pharmacy.

PATHOLOGY

PATH 205.3
Survey of Pathology
1/2(3L)

General and special pathology for pharmacists and physical therapists.

PHARMACOLOGY

PHCOL 350.6
Pharmacology
1&2(3L-3T Alt. weeks)

Prerequisite(s): HSC 208; BIOCH 200 and 211 (203 or 205) or equivalent.

Deals with the pharmacokinetics, therapeutic uses and toxicity of drugs. Pharmacological methods and principles are illustrated and discussed in tutorial sessions.

PHARMACY (2000)

The following courses are for students admitted to the B.S.P. program in September 1999 or later.

PHARM 200.1
Pharmacy Skills I
1&2 (3 L/T)

Prerequisite(s) or Corequisite(s): Completion of pre-pharmacy courses, and acceptance into the first-year of the Pharmacy program; PHARM 201.5, PHARM 203.5, PHARM 216.2, PHARM 280.2.

This course will provide an introduction to the profession of Pharmacy and the Pharmacy program with emphasis on necessary learning skills and the educational outcomes of the program. Students will also begin development of library (including online resources) and computer skills necessary for the pharmacist=s role as a drug information provider.

PHARM 201.5
Foundations of Pharmacy I: Physicochemical Principles of Drugs
1 (5 L/S, 3P, 1.5 T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of pre-pharmacy courses, registration in first-year Pharmacy; CHEM 111.3, 251.3; CHEM 252.3.

One of three foundation courses in Pharmacy, this course provides a link between the principles of basic chemistry and those of pharmaceutical chemistry. Modules deal with the chemical properties of drugs, an introduction to pharmacokinetics (how drugs are handled in the body), analytical procedures used to determine drug levels in body fluids and to assess quality assurance of drugs, and the pharmaceutical calculations associated with these concepts.

PHARM 203.5
Foundations of Pharmacy III: Pharmaceutical Dosage Forms and Dispensing I
2 (5 L/S, 3P, 1.5 T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of pre-pharmacy courses, registration in first-year Pharmacy; PHARM 201.5; PHARM 216.2.

An introduction to the design and preparation of dosage forms for drugs,

especially solutions, dispersions and solids such as tablets and capsules. This course will extend the discussions of the physicochemical principles of drugs introduced in PHARM 201.5 as they relate to the development of dosage forms. Students will also begin to develop their skills in the dispensing of prescriptions including the application of appropriate laws and standards of practice, and in the extemporaneous compounding of drug products and relevant pharmaceutical calculations.

PHARM 216.2
Foundations of Pharmacy II: Introduction to Pharmacy and the Health Care System
1 (3 L/S, 1.5 T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of pre-pharmacy courses; registration in first-year Pharmacy; PHARM 201.5, PHARM 203.5, PHARM 200.1, PHARM 280.2.

An introduction to the profession of Pharmacy and the Canadian health care system, including the social, behavioural and economic aspects of pharmacy practice.

PHARM 280.2
Structured Practical Experience I
1&2 (75 h C)

Prerequisite(s) or Corequisite(s): Completion of pre-pharmacy courses, registration in first-year Pharmacy; PHARM 200.1, PHARM 216.2.

To gain an appreciation of what Acare@ means to individuals, students will complete 75 hours of service-learning in a health care setting, or with a health care or service organization.

PHARM 300.1
Pharmacy Skills II
1&2 (3L/T for first 4 weeks of each term)

Prerequisite(s) or Corequisite(s): Completion of first year Pharmacy, registration in second-year Pharmacy; PHARM 303.4, PHARM 307.2, PHARM 365.5, PHARM 372.2, PHARM 380.4.

This course will continue the development of necessary learning skills and those required for drug information retrieval and dissemination. Students will also develop skills in public speaking and in written communication.

PHARM 303.4
Pharmaceutical Dosage Forms and Dispensing II
1 (4L/S, 3P, 1.5T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of first-year Pharmacy, registration in second-year Pharmacy, PHARM 203.5; PHARM 216.3; PHARM 307.2, PHARM 365.5, PHARM 372.2.

An extension of PHARM 203.5, this course continues the discussion of the design and preparation of dosage forms for drugs, especially semi-solids and other topical dosage forms, devices and modified release dosage forms. This course will also extend the discussions of the physicochemical principles of drugs introduced in PHARM 201.5 as they relate to the development of dosage forms. Students will also continue to develop their skills in the dispensing of prescriptions including the application of appropriate laws and standards of practice, and in the extemporaneous compounding of drug products and relevant pharmaceutical calculations.

PHARM 307.2
Pharmacokinetics and Biopharmaceutics
1 (3L/S, 1.5 T every 4 weeks)

Prerequisite(s) or Corequisite(s): Completion of first-year Pharmacy, registration in second-year Pharmacy; PHARM 201.5; PHARM 303.4, PHARM 372.2, PHARM 365.5.

A study of the physicochemical, pathologic and pharmaceutical factors affecting the absorption, distribution, and elimination of drugs from the body. The use of pharmacokinetic principles to design dosage regimens which optimize therapeutic effects and minimize toxicity will be discussed. The concepts of bioequivalence of drug products will also be covered.

PHARM 365.5
Patient Care I
2 (5L/S, 3P, 1.5T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of first -year Pharmacy, registration in second-year Pharmacy; PHARM 303.4, PHARM 372.2, PHARM 307.2, PHARM 380.4.

An introductory course in patient care, especially the areas of health promotion, disease prevention and self-care, and the role of the pharmacist in these areas. The treatment or prevention of various self-limiting health problems will be discussed. Students will begin to develop skills in patient care through interviewing and other communication skills activities.

PHARM 372.2
Research Methods and Evidence-Based Practice
2 (3 L/S, 1.5T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of first-year Pharmacy, registration in second-year Pharmacy; PHARM 200.1, STATS 245.3 or equivalent, PHARM 307.2; PHARM 300.1.

An introduction to research design and the critical appraisal of published research results in the pharmacy and medical literature. It is expected that students will apply knowledge of statistics to the field of pharmacy and biomedical research.

PHARM 380.4
Structured Practical Experience II
2 (160 hours over 4 weeks May/June)

Prerequisite(s) or Corequisite(s): Completion of first-year Pharmacy and registration in second-year Pharmacy; PHARM 280.2, PHARM 365.5, PHARM 300.1, PHARM 302.4.

A structured practice experience after completion of second year which will provide an opportunity for students to apply their technical skills and introduce them to patient care activities.

PHARM 400.1 (First offered 2001-02)
Pharmacy Skills III
1 (4T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy, registration in third-year Pharmacy; PHARM 408.4, PHARM 409.3, PHARM 417.4, PHARM 418.2, PHARM 472.2, PHARM 455.7, PHARM 456.7, PHARM 465.2, PHARM 480.4.

This course will continue the development of necessary learning skills and those required to provide drug information to consumers through introductory experiences in the Drug Information Centre. Students will also complete a first aid course and an in-depth workshop to further their skills in interviewing and assessing individual patients about their drug therapies.

PHARM 408.3 (First offered 2001-02)
Pharmaceutical Dosage Forms and Dispensing III: Sterile Dosage Forms
1 (3 L/S, 3P)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy, registration in third-year Pharmacy; PHARM 203.5, PHARM 303.4, PHARM 307.2.

An introduction to the design and preparation of sterile dosage forms, including parenteral preparations. This course will also extend the discussions of the physicochemical principles of drugs introduced in PHARM 201.5 as they relate to the development of sterile dosage forms. Students will develop their skills in the preparation and dispensing of sterile dosage forms including the application of standards of manufacture and practice and relevant pharmaceutical calculations.

PHARM 409.3 (First offered 2001-02)
Pharmaceutical Biotechnology
2 (3L/S, 1.5 P or T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy, registration in third-year Pharmacy; PHARM 201.5, PHARM 203.5, PHARM 303.4, PHARM 307.2; PHARM 408.3.

An introduction to the principles of biotechnology as they apply to the development of pharmaceutical products. Discussions will also focus on the uses of these products in the treatment of various conditions, the pharmacist=s role in their provision, and the legal, ethical and economic issues associated with pharmaceutical biotechnology.

PHARM 417.4 (First offered 2001-02)
Management in Pharmacy
1&2 (3 L/S, 1.5 T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy, registration in third-year Pharmacy; PHARM 365.5, PHARM 300.1, PHARM 303.4, PHARM 380.4; PHARM 418.2.

An introduction to management principles and how they apply to practice management in pharmacy, and to the principles and issues associated with safe and appropriate drug distribution in various practice settings.

PHARM 418.2 (First offered 2001-02)
Issues in Pharmacy I
1&2 (1.5 L/S/T)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy, registration in third-year Pharmacy; PHARM 417.4, PHARM 472.2, PHARM 465.2.

A study of the ethical aspects of pharmacy practice and issues related to the professional responsibilities of the pharmacist.

PHARM 455.7 (First offered 2001-02)
Pharmacotherapeutics I
1 (8 L/S, 3P, 1.5T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy, registration in third-year Pharmacy; PHARM 400.1, PHARM 465.2, PHARM 472.2.

The first of three courses involving the study of the clinical application of drug therapy in various disease states, including discussion of relevant principles of medicinal chemistry, applied pharmacokinetics, adverse effects or interactions, and toxicology.

PHARM 456.7 (First offered 2001-02)
Pharmacotherapeutics II
2 (8 L/S, 3P, 1.5T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy, registration in third-year Pharmacy; PHARM 400.1, PHARM 465.2, PHARM 472.2, PHARM 455.7.

The second of three courses discussing the clinical application of drug therapy in various disease states, including discussion of relevant principles of medicinal chemistry, applied pharmacokinetics, adverse effects or interactions, and toxicology.

PHARM 465.2 (First offered 2001-02)
Patient Care II
2 (3L/S, 1.5 T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy, registration in third-year Pharmacy; PHARM 365.5; PHARM 455.7, PHARM 456.7.

The second of three courses dealing with Patient Care activities, including discussion of alternative or complimentary health care practices, prevention and treatment of drug misuse/abuse, and the prevention/treatment of drug overdose.

PHARM 472.2 (First offered 2001-02)
Evidence-Based Practice
1 (3 L/S, 1.5 T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy, registration in third-year Pharmacy; PHARM 372.2, PHARM 200.1, PHARM 300.1; PHARM 400.1.

An extension of PHARM 372.2, continuing the development of skills in drug literature evaluation and the application of research findings to patient care situations or the development of standards of care.

PHARM 480.4 (First offered 2001-02)
Structured Practical Experience III
2 (160 hours in 4 weeks in May/June)

Prerequisite(s) or Corequisite(s): Completion of second-year Pharmacy and registration in third-year; PHARM 280.1, PHARM 380.2; PHARM 455.7, PHARM 456.7, PHARM 465.2, PHARM 418.2.

A structured practice experience after completion of third year which will provide an opportunity for students to expand their technical, professional and patient care skills in a practice setting.

PHARM 500.1 (First offered 2002-03)
Pharmacy Skills IV
1 (3T as scheduled)

Prerequisite(s) or Corequisite(s): Completion of third-year Pharmacy, registration in fourth-year Pharmacy; PHARM 200.1, PHARM 300.1, PHARM 400.1; PHARM 557.6, PHARM 518.2, PHARM 565.2, PHARM 580.16.

This course will continue the development of necessary learning skills and those required to provide drug information to health professionals through additional experiences in the Drug Information Centre. Students will also complete a CPR course and an in-depth workshop to further their problem-solving skills in the area of drug information retrieval and provision.

PHARM 518.2 (First offered 2002-03)
Issues in Pharmacy II
1 (3 L/S, 1.5T)

Prerequisite(s) or Corequisite(s): Completion of third-year Pharmacy, registration in fourth-year Pharmacy; PHARM 417.4, PHARM 418.2; PHARM 500.1, PHARM 557.6, PHARM 565.2, PHARM 580.16.

A study of pharmacoepidemiologic and pharmacoeconomic issues affecting health care and pharmacy practice.

PHARM 557.6 (First offered 2002-03)
Pharmacotherapeutics III
1 (7.5L/S, 2P, 1.5T)

Prerequisite(s) or Corequisite(s): Completion of third-year Pharmacy, registration in fourth-year Pharmacy; PHARM 455.7, PHARM 456.7; PHARM 500.1, PHARM 518.2, PHARM 565.2, PHARM 580.16.

The third of three courses discussing the clinical application of drug therapy in various disease states, including discussion of relevant principles of medicinal chemistry, applied pharmacokinetics, adverse effects or interactions, and toxicology.

PHARM 565.2 (First offered 2002-03)
Patient Care III
1 (3L/S, 1.5 P or T alt weeks)

Prerequisite(s) or Corequisite(s): Completion of third-year Pharmacy, registration in fourth-year Pharmacy; PHARM 365.5, PHARM 465.2, PHARM 455.7, PHARM 456.7; PHARM 557.6, PHARM 518.2, PHARM 500.1, PHARM 580.16.

The third of three Patient Care courses, this course involves the study of drug therapy considerations for specific patient populations such as the elderly, neonates, infants, children and pregnant women. New strategies for disease management (e.g., care plans, ambulatory care clinics) will also be covered.

PHARM 580.16 (First offered 2002-03)
Structured Practical Experience IV
2 (16 weeks or 640 hours of structured practical experiences)

Prerequisite(s) or Corequisite(s): Completion of third year and all courses in the first term of fourth year.

Structured practice experiences will provide an opportunity for students to expand their technical, professional and patient care skills in practice settings, including both a community pharmacy and hospital. Students will also have the opportunity to select an additional practice site to gain further professional experience.

PHARMACY (PRIOR TO 2000)

The following pharmacy courses are for students admitted to the B.S.P. program prior to 1999.

> Admission to the Bachelor of Science in Pharmacy program is a prerequisite for registration in courses designated PHARM Selected courses may be available to other students by special permission.

PHARM 550.6 (Last offered 2001-02)
Therapeutics II
1(6L)&2(3T)

Prerequisite(s): PHCOL 350.

Deals with the clinical application of drug therapy in various disease states, including pathophysiology and clinical presentation of the disease as well as current therapeutic regimens. Case study methods are used in both terms to emphasize key points in the assessment of rational drug therapy.

PHARM 561.5 (Formerly 560.6)
(Last offered 2001-02)
Pharmacy Practice V
1(3L)&2(3S-3T for six weeks)

Prerequisite(s) or Corequisite(s): PHARM 550, 552, 562 and 564.

Lectures, tutorials and practical training in specific aspects of pharmacy practice with emphasis on pharmaceutical care. Topics include patient monitoring, drug therapy for geriatric and pediatric patients, palliative care, drug therapy during pregnancy and lactation, and iatrogenic diseases. Students will be expected to present seminars and to participate in tutorials.

PHARM 563.8 (Formerly PHARM 562.2 and PHARM 564.2; (last offered 2001-02)
Pharmacy Clerkships
2(320 h total)

Prerequisite(s) or Corequisite(s): PHARM 552.3, PHARM 550.6, PHARM 561.5, and registration as an intern with the Saskatchewan Pharmaceutical Association.

Students will spend 40 hours per week for two four-week periods, one in an assigned community pharmacy site and one in an assigned hospital site. The clerkships are designed to provide students with opportunities to observe the role of drug therapy in the treatment of patients, to integrate and apply pharmaceutical, pharmacologic and therapeutic principles learned in previous courses, and to practice professional skills such as pharmacotherapeutic monitoring and communication with patients and other health professionals.

PHARMACY ELECTIVES

PHARM 415.3
Community Pharmacy Management
1(3L)

A study of the problems which must be met in the successful operation of a community pharmacy practice including: selection of organizational structures, location, analysis, purchasing and financing a community pharmacy, risk management and insurance, inventory purchasing procedures and inventory management, pricing decisions, advertising, sales promotion and salesmanship, security and general business policies.

PHARM 421.3
Forensic Toxicology
1(3L-3P)

Deals with the analytical procedures involved in the detection of chemicals and drugs in body tissues and fluids and the identification of drugs of abuse. Appropriate instrumentation for analysis is discussed and employed in the practical component of the course.

PHARM 439.3
Advanced Drug Analysis
2(3L-3P)

Prerequisite(s): PHARM 330.

Makes use of instrumental methods for the analysis of drugs and pharmaceuticals. The lectures survey a classification of methods of instrumental analysis and briefly consider the theory involved and types of apparatus used. The laboratory work involves analytical procedures for representative drugs, and related dosage forms using a variety of instruments. Official quality control analysis of pharmaceuticals is emphasized.

PHARM 445.3
Applied Pharmaceutics: Design and Manufacturing of Dosage Forms
1(3L-3P)

A discussion of the processes used and the problems inherent in manufacturing of tablets, capsules, modified release dosage forms, liquids, emulsions, suspensions, semisolids, suppositories, aerosols, and sterile products. Laboratory exercises in which the student manufactures and tests these dosage forms are a major component.

PHARM 462.3
Hospital Pharmacy Practice
1(3L-3T)

Introduction to the role of the pharmacist as a member of the health care team in the provision of health services in the hospital. Emphasis will be placed on the elements of hospital pharmacy practice and the skills required to work as a pharmacist in the hospital setting. Students will have the opportunity to observe and practice various hospital pharmacy activities in a Saskatoon hospital.

PHARM 532.3
Drug Design
1(3L)

Prerequisite(s): PHARM 432 or permission of the department.

The principles of rational design of new compounds for pharmacological evaluation will be given with special reference to the postulated mode of action at the cellular level.

PHARM 533.3
Natural Products
1(3L)

Prerequisite(s): BIOCH 200 and 211 (203 or 205) or equivalent and PHARM 331.

An advanced study of medicinal compounds of natural origin. Precise topics vary from year to year. The preparation and presentation of papers is an essential course component. This is not a lecture course.

PHARM 542.3 (Last offered 2001-02)
Clinical Pharmacokinetics
1(3L)

Prerequisite(s): PHARM 442 or permission of the instructor.

The application of basic pharmacokinetics to the safe and effective management of drug therapy in individual patients. Topics will include initial design of drug dosage regimens, as well as use of plasma levels to monitor and adjust therapy. A limited number of drugs including theophylline, digoxin, aminoglycoside antibiotics, phenytoin and lithium will be discussed in detail. Case histories will be used to illustrate clinical situations.

PHARM 553.3 (Last offered 2001-02)
Drug Interactions
1(3L)

Prerequisite(s): PHCOL 350.

A general toxicological discussion of the mechanisms and clinical significance of interactions involving drugs with other drugs, food, endogenous physiologic chemical agents, environmental chemicals, laboratory tests and intravenous solutions. Emphasis will be on placing drug interactions in perspective relative to the field of adverse drug reactions, and the pharmacist's involvement in this area.

PHARM 570.3 (Last offered 2001-02)
Drug Information and Literature Evaluation
1(3L)

This elective course is intended to develop the senior Pharmacy student's expertise in the application of the drug literature to clinical situations. The further aims are to provide an insight into drug literature evaluation and clinical communication by the pharmacist to other members of the health care team. Lecture, discussion and tutorial topics will include primary, secondary and tertiary literature sources, principles of literature evaluation and study design, information storage and retrieval as well as the dissemination, types and sources of drug information. A computer assisted instruction module is an important component. Designed for those students who have special interest in the practice of clinical pharmacy since drug information and literature evaluation are such an integral aspect of the contemporary pharmacy practice.

PHARM 591.3
Directed Studies: Thesis
1/2(6R) or 1&2(3R)

On the basis of library research, the student will prepare a 40-60 page thesis on a subject related to pharmacy. The subject is chosen in consultation with a faculty member who will also supervise preparation of the manuscript. The thesis will be graded by two faculty members.

Note: The student must obtain permission from the supervising faculty member before registering for the course.

PHARM 592.3
Directed Studies: Research
1/2(6P) or 1&2(3P)

The student will complete a research project under the supervision of a faculty member. A report to be submitted at the completion of the project, will be graded by two faculty members. The report should include a suitable literature review, a description of research methodology and a discussion of the results of the project.

Note: The student must obtain permission from the supervising faculty member before registering for the course.

PHYSIOLOGY

HSC 208.6
Human Body Systems
1&2(3L)

Prerequisites: Biol 110 and Chem 111

Introduces the major organ systems of the human body and how they function.

DIVISION OF NUTRITION AND DIETETICS

The Division of Nutrition and Dietetics was established in 1987. Prior to this, programs in nutrition and dietetics were offered through the College of Home Economics.

REVISED NUTRITION UNDERGRADUATE DEGREE PROGRAM

A revised B.Sc.(Nutrition) program was implemented in September 1998. It involves a new structure and a new partnership with the Regina Health District, Saskatoon District Health and other health districts and Tribal Councils in the province. Previously, University of Saskatchewan students interested in becoming dietitians completed the four-year degree in Nutrition and then competed in a national competition to obtain a one-year dietetic internship. Students now take a pre-Nutrition year and then apply to the revised four-year program. **All of the required professional experiences are included within the nutrition degree**, and all graduates, on successful completion of a national exam, qualify for professional dietetics registration. The program is accredited by Dietitians of Canada (DC), the national association for dietitians and nutritionists, and meets DC education guidelines.

The professional experiences are provided primarily through the Professional Practice courses (NUTR 230.3, 330.3, 430.3 and 530.33. NUTR 530.33 (fourth year of the program) is a 36-week* practice-based experience and students have their home base with the Regina Health District or Saskatoon District Health.

*This 36 week period includes a two-week break half-way through the practice-based experience.

Career opportunities include positions with health care organizations such as hospitals (clinical and administrative dietetics and outpatient clinics), public health services and home care, Tribal Councils, medical clinics and community health centres, food, food service, and pharmaceutical industries, food marketing boards, fitness/wellness centres, private practice and consulting, research, media and consumer services. Advanced studies lead to university faculty positions and work with international health agencies.

DIRECT-ENTRY NUTRITION UNDERGRADUATE DEGREE PROGRAM

Students in the direct-entry B.Sc.(Nutrition) program will continue on in the program in which they began studies. Please refer to the *1997-98 Calendar* for details on program requirements including Food Safe I and Public Speaking certificates. No new applicants will be accepted to the direct-entry program. Applicants who discontinued the direct-entry program and wish to return will be readmitted, providing they can complete the program by 2002 (or by special permission granted by the college). Returning students may apply for admission to the revised program, and would compete through the admission process for the revised program.

REQUIREMENTS FOR THE DIETETICS PROFESSION

Qualification for registration as a professional dietitian includes the following components: a Bachelor's degree in Nutrition or related area and specific undergraduate courses, professional experiences and a national examination.

For students in the revised program, the professional experiences required for the dietetics profession are included within the degree.

For students in the direct-entry program, the experiences may be obtained through postgraduate dietetic internship or graduate degree plus achievement of specific competencies. Please note that completion of the direct-entry B.Sc.(Nutr.) does not guarantee placement in an internship program. Students compete for a limited number of internships, based on academic record, work experience and individual abilities and interests.

On successful completion of the national examination, graduates are eligible for professional registration through their provincial dietetics regulatory body, for membership in the national association (Dietitians of Canada) and for positions as professional dietitians.

SECOND DEGREES

Students who wish to combine a program in Arts and Science with Nutrition will usually conform to the requirements of Program Types A, B, C or D in choosing the necessary minimum additional 30 credit units in Arts and Science for the Three-year degree or minimum additional 60 credit units for the Four-year or Honours degree.

SASKATCHEWAN COMMUNITY NUTRITION RESIDENCY

The Division, together with Saskatoon District Health, Regina Health District, East Central Health District, North Central Health District and Saskatchewan Health, sponsor the Saskatchewan Community Nutrition Residency. This program provides advanced training in community nutrition to dietitians or individuals seeking professional dietetics qualifications through the graduate degree route.

GRADUATE STUDY IN NUTRITION

Applicants holding a recognized four-year Bachelor of Science in Nutrition or related degree, and who have obtained sufficiently high academic standing, may apply to the College of Graduate Studies and Research to pursue the degree of Master of Science in Nutrition. Current research in nutrition involves studies in clinical and community nutrition, nutritional biochemistry, dietary assessment, body composition and food biotechnology. A Ph.D. degree is offered on a special case basis. Please see Nutrition, College of Graduate Studies and Research section of the *Calendar.*

REVISED BACHELOR OF SCIENCE IN NUTRITION PROGRAM

ADMISSION REQUIREMENTS

Applicants planning to enter the revised Nutrition program should have an interest in health care and in people, as well as an aptitude in the natural sciences. Communication and organizational skills, analytical ability, empathy, accuracy, ability to motivate and work with others are important attributes that will be developed in the nutrition program.

Applicants wishing to enter the revised nutrition program require one year (30 credit units) of pre-nutrition studies. These studies may be undertaken in the College of Arts and Science. To qualify for admission to the pre-nutrition year, applicants must have met the admission requirements for the College of Arts and Science. To complete the courses required in the pre-nutrition year, applicants will normally need to have credit for the following high school subjects: English A30 and English B30 (or, beginning in 2000, for applicants who complete the Fransaskois or French Immersion programs, English A30 or B30 and one other 30-level language arts subject), Biology 30, Chemistry 30, Mathematics B30 and C30 (or, under the old mathematics curriculum, Algebra 30 and Geometry-Trigonometry 30).

The pre-nutrition year consists of the following university courses or their equivalents from other institutions:

(1) BIOL 110.6

(2) CHEM 111.3

(3) CHEM 251.3

(4) ENG 110.6 or LIT 100.6 or FR 121.3 (or 122.3) and 125.3

(5) PSY 110.6 or SOC 110.6

(6) Electives (6 credit units unrestricted)
NUTR 120.3 may be taken in the pre-nutrition year in place of a 3 credit unit elective, and the 3 credit unit elective can then be scheduled in year 1 of the Nutrition program.

Applicants can be deficient in one of the preceding classes except for BIOL 110 or CHEM 111. This deficiency must be cleared in the first year of the program. In order to be considered for admission for 2001-2002, applicants must have completed a minimum of 24 credit units by April 30, 2001 and a total of 30 credit units by September 1, 2001.

Students may take courses toward the pre-nutrition year at The University of Regina. For details, consult Admission to Professional Programs from The University of Regina, in the General Information section of the *Calendar.* Those planning to register at The University of Regina should obtain application forms from the Registrar, The University of Regina.

Application forms are available from the College of Pharmacy and Nutrition. Please note that the application deadline for 2002-2003 is February 1, 2002. A total of 25 applicants are admitted to first year. Saskatchewan residents and children or spouses of University of Saskatchewan graduates are given priority in consideration for admission for 19 of the spaces, and there are 4 spaces for non-residents (out-of-province or international applicants) and 2 spaces for applicants of Aboriginal ancestry. If the latter two spaces are not filled, they will be filled by the next most-qualified applicants (resident or non-resident).

Acceptance into the B.Sc.(Nutr.) program for 2001-2002 is based on the applicant's post-secondary academic record. A minimum average of 60% is required; however the effective cut off average may be higher than the minimum and varies from year to year. Please note that admission for 2001-2002 and after will be based on post-secondary record (60% of admission score), critical thinking skills essay (30%) and personal profile (10%). Detailed information regarding these criteria and the admission process is available from the College of Pharmacy and Nutrition.

ADMISSION OF ABORIGINAL APPLICANTS

Two first year spaces are reserved for persons of Aboriginal ancestry. Applicants will be required to complete the courses of the pre-nutrition year. They will compete within this category, not against the entire applicant pool. Applicants should identify themselves on the application for admission. For details, consult Admission of Aboriginal Applicants, in the General Information section of the *Calendar.*

PROGRAM REQUIREMENTS

First Year

AP MC 212.3; BIOCH 200.3, 211.3; NUTR 120.3, 216.3, 220.3, 230.3; HSC 208.6; Electives (6 credit units unrestricted).

Second Year

COMM 101.3 or 102.3; PL SC 314.3; FD SC 345.3; NUTR 300.3, 305.3, 322.3, 330.3, 350.3, 365.3; Electives (6 credit units unrestricted).

Third Year

COMM 201.3; FD SC 323.3; NUTR 420.3, 425.3, 430.3, 440.6, 450.3, 466.3; Electives (6 credit units unrestricted).

Fourth Year

NUTR 530.33.

FOOD SAFE CERTIFICATES

Students are required to complete Food Safe Level I and II during their program. Food Safe Level I is an eight hour, nationally recognized training program for food handlers, and is taken in conjunction with NUTR 216. Food Safe Level II is a nine hour program, designed for food service managers, and is taken in conjunction with NUTR 365. Students who already hold Food Safe Level I or equivalent (e.g., National Sanitation Training Program Certificate) and Level II certificates are not required to repeat the programs, provided that they have been taken within the last three years, but must present the certificates for consideration and entry into the student record.

PUBLIC SPEAKING CERTIFICATE

Students are required to complete an extramural course in public speaking during their program. A "Speechcraft" course (arranged through the Saskatoon Toastmasters Clubs) will be made available to students during their second year of the nutrition program. A student who holds a valid certificate indicating training in public speaking may present the certificate and appropriate course information for consideration in lieu of Speechcraft, and entry into the student record.

INFORMATION PERTAINING TO STUDENTS IN THE DIRECT-ENTRY AND REVISED B.SC.(NUTR.) PROGRAMS

REGISTRATION, FEES, PAYMENT OF FEES, CANCELLATION AND REFUNDS, AND COURSE CHANGES

See the General Information section of the *Calendar,* in particular the dates by which courses may be dropped without academic penalty.

GRADING

See the General Information section of the *Calendar* for a full explanation of the grading system and the literal descriptors associated with percentage grades.

STANDARDS OF ACADEMIC PERFORMANCE

Candidates for the degree are required to obtain an annual weighted average of 60%, and CR (Completed Requirements) for the professional practice courses in the revised program, and have no more than two failures in the Regular Session, or the student will be required to discontinue the program in nutrition. Students who do not meet the requirements in their graduating year will be considered on an individual basis. The annual weighted average is based on courses taken during the Regular Session (September-April) and the Spring and Summer Session immediately prior to this. Credit units indicate the relative academic weight of each course and are used to calculate the weighted average. Records of part-time students will be evaluated at 18 credit-unit intervals. Application from students who have been "Required to Discontinue" more than once will not be approved except in extreme circumstances. Students may be required to withdraw from the program for reasons other than academic.

Students required to discontinue are permitted to apply for admission to another program or as an unclassified student at this university or any other accredited post-secondary institution, for study during the year that the faculty action is in place (called the period of rustication), except when the faculty action is a matter of academic or non-academic discipline. Such applications are considered on a case by case basis by the program to which the student is applying.

Direct-entry program: Students required to discontinue from the former direct-entry B.Sc.(Nutr.) program should contact the college to determine how implementation of the revised program will affect their application for readmission to the former program following the period of rustication.

Revised program: Students who are required to discontinue and have served the period of rustication without taking any credit courses from this or any other accredited post-secondary institution will be readmitted to the program, on application, provided that there is space in the year to which they are applying to return. Students who are required to discontinue, but who have taken classes here or elsewhere during the period of rustication, will be readmitted, on application, provided that their average in the classes taken meets the promotion standard for the college and provided that there is space in the year to which they are applying to return. Students who take courses during the period of rustication and are readmitted will be given credit, according to college policies, for these courses toward their program.

A complete description of academic requirements including promotion and failures, and additional regulations, is available in the Office of the Dean of Pharmacy and Nutrition and in the college undergraduate *Student Handbook.* The *University Council Regulations on Examinations* appears at the end of the General Information section of the *Calendar* and on the web at www.usask.ca/registrar. *Student Appeals in Academic Matters* and *Student Academic Dishonesty* are available from the Office of the Registrar, the Dean's Office and on the web at www.usask.ca/registrar/.

ADDITIONAL REGULATIONS

Students may not, at any time, register in courses with a timetable conflict. Students wishing to graduate must complete the courses for the degree within a seven year period after first registration in the program. In exceptional circumstances permission may be granted to continue study beyond the seven year limit. Students must meet the degree requirements in place when the extension is granted.

Direct-entry program: Students in the direct-entry program must remove first year deficiencies before registering in third year, and second year deficiencies before registering in fourth year. To receive the direct-entry B.Sc.(Nutr.), students must complete at least 18 credit units of nutrition courses, and at least 30 of the last 60 credit units of their program, in the Division of Nutrition and Dietetics, College of Pharmacy and Nutrition. Students who hold a three-year or four-year degree in another area must complete a minimum additional 30 or 60 credit units, respectively.

Revised program: The college will try to accommodate student requests for part-time studies/leaves from the program, however, this will depend on space being available in the professional practice courses. Regulations regarding removing deficiencies and residency requirements (i.e. total minimum number of courses required while registered in the program) are under review.

DEAN'S HONOUR ROLL

To be included on the Dean's Honour Roll, students must have a sessional weighted average of 80% or greater and must have completed a minimum of 30 credit units in the Regular Session.

SCHOLARSHIPS AND AWARDS

For details on the following awards and other awards open to all University students, including students in the College of Pharmacy and Nutrition, see the *Awards Guides* (available at the Office of the Registrar).

Association of Saskatchewan Home Economists Regina Branch Bursary $1,000
Theodora Bryce Book Prize (Nutrition and Dietetics)
Dr. Helen E. Clark Bursary in Nutrition $500
Dairy Farmers of Canada Award $700
Adelaide Dodds Bursary $1,300
Ruth Gerrand Prize $300
Douglas L. Gibson Award
Hannon Scholarships:
Undergraduate $2,500
Travel $5,000
Agnes Kurtz Book Prize
John Fullerton Middlemiss Scholarship $1000
Ariel Milne Scholarship $100
Rutter Medal
Saskatchewan Dietetic Association Scholarships $250
Sign of the Times Lifestyle Bursary $500
Euphie Thomson Book Prize
University Undergraduate Scholarships $1,000

GRADUATION

The degree of Bachelor of Science in Nutrition will be awarded to students who successfully complete the approved direct-entry program of 120 credit units or the approved revised program of 132 credit units.

DEGREE WITH DISTINCTION

Students whose cumulative weighted averages are 1.25 or more standard deviations above the mean of the average of their class and who also obtain minimum cumulative weighted averages of 80.00% or greater will receive the degree with Great Distinction. Students whose cumulative weighted averages are between .50 and 1.25 standard deviations above the mean of the average for their class and who also obtain minimum cumulative weighted averages of 75.00% or greater will receive the degree with Distinction. Students' averages are calculated from the grades obtained on all courses taken to complete degree requirements, including failures.

THE SASKATCHEWAN PHARMACY AND NUTRITION STUDENTS' SOCIETY

The Saskatchewan Pharmacy and Nutrition Students' Society (SPNSS) works to enhance knowledge of the professions of dietetics/nutrition, pharmacy and related areas and to foster good relations among their members and with other student organizations, the university and the community. The Society organizes a variety of academic, social and athletic events and activities.

COURSE DESCRIPTIONS

See the General Information section of the *Calendar* for an explanation of the format used in course descriptions.

NUTRITION

Not all courses described in this Calendar are given in any one academic year. Please consult the *Registration Guide* for a timetable of courses offered in the 2001-2002 Regular Session.

NUTR 120.3
Basic Nutrition
1/2(3L)

An introduction to nutrition and health. The concepts of recommended nutrient intakes and dietary guidelines are introduced. The major nutrients and their functions in the body are outlined. Nutrition issues facing the general public are presented.

NUTR 216.3
Fundamentals of Foods
1(3L-3P)

Prerequisite(s): CHEM 111; BIOL 110; NUTR 120, or permission of the Division.

Addresses issues and concepts relating to foods in order to understand food availability, nutrition recommendations, consumer trends, and food service practices. Foods will be studied as to their chemical and physical properties and their nutrient contribution to the human diet.

NUTR 220.3
Advanced Nutrition
2(3L-1.5P)

Prerequisite(s): NUTR 120; BIOCH 211 (or 203) and PHSIO 212 (or HSC 280.6) or Corequisite(s), or permission of the Division.

An advanced nutrition course with emphasis on the underlying physiological and biochemical roles of nutrients. The principles of digestion, absorption, transport, and metabolism of major nutrients will be discussed, as well as the food sources of nutrients and chemical and physiological interactions of nutrients from various food sources.

NUTR 230.3
Professional Practice 1
1(1.5L/S)

Prerequisite(s): first-year standing in the revised B.Sc.(Nutr.) program.

An introduction to the profession of dietetics. Review of historical, political, social aspects of health care; health care structures; and current issues relating to the nutrition discipline and the dietetics profession.

NUTR 300.3
Professional Communications
2(2L-2T)

Prerequisite(s): Minimum third year standing and a public speaking course (or Corequisite(s)).

A study of factors affecting understanding and communication with others. Provides opportunities to practise various communication techniques and develop the skills necessary to communicate with other health professionals and patients.

NUTR 305.3
Research Methods
1(3L)

Prerequisite(s): NUTR 220; PL SC 314 or equivalent or Corequisite(s), or permission of the Division.

A study of research methods in science and nutrition. Focuses on interpreting, evaluating, applying and communicating scientific research.

NUTR 322.3
Nutrition Throughout the Lifespan
1(3L)

Prerequisite(s): NUTR 220 or permission of the Division.

An application of the principles of nutrition to nutritional demands, nutrition assessment and nutrition education throughout the lifespan. The approach will focus on nutrition during pregnancy, lactation, infancy, childhood and adolescence as well as in the elderly.

NUTR 330.3
Professional Practice 2
1&2(1.5P/T)

Prerequisite(s): NUTR 230 and second year standing in the revised B.Sc.(Nutr.) program.

Begins the process of enabling students to articulate and document the required competencies for entry-level dietetic practice, based on experiences obtained in the Nutrition Resource and Volunteer Centre (N.R.V.C.). Introduction to self-directed learning; preparation of learning contracts outlining experiences to be completed to meet specific course objectives.

NUTR 350.3
Introduction to Community Nutrition
2(3L)

Prerequisite(s) or Corequisite(s): NUTR 322.

Introduction to the field of community nutrition and its role in health and health care. The focus is on the process and theoretical foundations of nutrition education and the theories, methods and research perspectives applicable to nutrition education. The role of the community nutritionist in determining, delivering and managing community nutrition services is emphasized along with the tools, skills and techniques necessary for developing effective services.

NUTR 365.3
Quantity Food Production and Service
2(3L-3P)

Prerequisite(s): NUTR 216 or permission of the Division.

Studies the management responsibilities in quantity food production with emphasis on menu planning, purchasing, service, preparation for quality, cost and sanitation control.

NUTR 420.3
Current Issues in Nutrition
2(3L)

Prerequisite(s) or Corequisite(s): NUTR 425 and 440, or permission of the Division.

An in-depth examination of contemporary issues such as diet and heart disease, influence of lifestyle factors on nutrition, nutrition labelling and health claims, and nutraceuticals. Controversies in nutrition and cultural aspects of food are also discussed.

NUTR 425.3
Nutritional Assessment
1(3L-1.5T)

Prerequisite(s): Minimum fourth year standing.

Theory and methods of nutritional assessment for individuals and groups, including methods for assessment of dietary intake, biochemical, anthropometric and clinical evaluation.

NUTR 430.3
Professional Practice 3
1&2(1.5P/T)

Prerequisite(s): NUTR 330 and third year standing in the revised B.Sc.(Nutr.) program.

Builds on NUTR 330 by continuing the process of enabling students to articulate and document the required competencies for entry-level dietetic practice, based on experiences obtained in both formal learning and work/volunteer activities. Students are expected to complete a wide variety of increasingly challenging experiences, either through the N.R.V.C. or other agencies and organizations, aimed at meeting the specific objectives of the course.

NUTR 440.6
Clinical Nutrition
1&2(3L-1.5P)

Prerequisite(s) or Corequisite(s): NUTR 425.

A discussion of the role of nutrition in the etiology, pathophysiology, treatment and prevention of human disease. Principles underlying nutritional care will be emphasized.

NUTR 450.3
Nutrition Program Planning and Evaluation
1(3L/P)

Prerequisite(s): NUTR 350.

Provides an understanding of the theories, principles, and techniques involved in planning and evaluating nutrition programs. Students will work together to plan a nutrition program for a local agency or organization.

NUTR 466.3
Organization and Management of Food service Systems
1(3L)

Prerequisite(s): NUTR 365; COMM 101 or 102 or Corequisite(s); minimum fourth year standing or permission of the Division.

A study of philosophy and functions of management as applied to food services, principles of organization, human resource management, work improvement, utilization of resources and labour-management relations.

NUTR 480.3
Directed Studies in Nutrition
1/2(6P/R) or 1&2(3P/R)

Prerequisite(s): Permission of the course coordinator and supervising faculty member.

Provides individual students with an opportunity to undertake independent and advanced study in nutrition. Projects may involve laboratory or field work and/or library research. The student must choose the project in consultation with a faculty member.

Note: Students with credit for NUTR 481 may not take this course for credit.

NUTR 481.6
Directed Studies in Nutrition
1&2(6P/R)

Prerequisite(s): Permission of the course coordinator and supervising faculty member.

Provides individual students with an opportunity to undertake independent and advanced research in nutrition. Projects will involve laboratory or field work and library research. The student must choose the project in consultation with a faculty member.

Note: Students with credit for NUTR 480 may not take this course for credit.

NUTR 530.33
Professional Practice 4
1&2(C/T) 36 weeks

Prerequisite(s): NUTR 430 and fourth year standing in the revised B.Sc.(Nutr.) program.

Thirty-four week practice-based experience with either Saskatoon District Health or Regina Health District (plus experiences in other health districts and Tribal Councils in the province). The course provides students with opportunities to acquire the knowledge, skills and behaviors required to practice as a dietitian. All areas of entry-level practice will be experienced across the spectrum of nutritional care.

Note: The 36-week practice-based experience includes a 2-week break.

For descriptions of courses given by other colleges, please refer to the appropriate college section of the *Calendar*, or to the pages indicated in the Index.