

**REGULATIONS FOR THE DEGREE OF
BACHELOR OF PHARMACY
(BPharm)**

These regulations are applicable to candidates admitted under the 4-year BPharm curriculum in the academic year 2012-2013 and thereafter.

(See also General Regulations and Regulations for First Degree Curricula)

Admission to the BPharm degree

- BP1** To be eligible for admission to the BPharm degree, candidates shall:
- (a) comply with General Regulations;
 - (b) comply with the Regulations for First Degree Curricula; and
 - (c) satisfy all the requirements of the curriculum in accordance with these regulations and the syllabuses.
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Period of study

- BP2** The curriculum for the degree of Bachelor of Pharmacy shall normally require eight semesters of full-time study, extending over not fewer than four academic years, and shall include any assessment to be held during and/or at the end of each semester. Candidates shall not in any case be permitted to extend their studies beyond the maximum period of registration of six academic years.
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Selection of courses

- BP3**
- (a) Candidates shall select their courses in accordance with these regulations and the guidelines specified in the syllabuses before the beginning of each semester. Changes to the selection of courses may be made only during the add/drop period of the semester in which the course begins, and such changes shall not be reflected in the transcript of the candidate. Requests for changes after the designated add/drop period of the semester shall not be considered, unless under exceptional circumstances.
 - (b) Withdrawal from courses beyond the designated add/drop period will not be entertained.
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Curriculum requirements

- BP4** To complete the curriculum, candidates shall:
- (a) satisfy the requirements prescribed in UG5 of the Regulations for First Degree Curricula; and
 - (b) complete satisfactorily the professional core of 204 credits, in the manner specified in these regulations and the syllabuses, including the course "BPHM4161 Clerkship and Research Project" to be taken in the final year of study as the capstone experience.
- BP5**
- (a) Candidates shall normally take not fewer than 24 and not more than 30 credits of courses in each semester, unless otherwise permitted or required by the Board of the Faculty.
 - (b) Candidates shall have to satisfactorily complete the prerequisite courses in order to enroll in succeeding courses, unless with exemption granted by the Board of the Faculty.

Advanced standing

- BP6** (a) Advanced standing may be granted to candidates who have successfully completed a similar course at other universities or comparable institutions. The amount of credits to be granted for advanced standing shall be determined by the Board of the Faculty, in accordance with UG2 of the Regulations for the First Degree Curricula.
- (b) Credits granted for advanced standing to a candidate shall not be included in the calculation of his/her cumulative GPA unless permitted by the Board of the Faculty but will be recorded on the transcript of the candidate.
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Assessment

- BP7** (a) Candidates shall be assessed for each of the courses which they have registered for, and assessment may be conducted in any one or any combination of the following manners: written examinations or tests, continuous assessment, laboratory work, project reports, or in any other manner as specified in the syllabuses.
- (b) Grades shall be awarded in accordance with UG8(a) of the Regulations for the First Degree Curricula.

<i>Grade</i>	<i>Standard</i>	<i>Grade Point</i>	
A+ } A } A- }	Excellent	4.3 4.0 3.7	
B+ } B } B- }		Good	3.3 3.0 2.7
C+ } C } C- }			Satisfactory
D+ } D }	Pass		
F		Fail	

- (c) Written examinations shall normally be held at the end of each semester unless otherwise specified in the syllabuses.
- (d) Candidates who are unable, because of illness or other special circumstances, to be present at any examination of a course may apply for permission to present themselves at a supplementary examination of the same course to be held before the beginning of the First Semester of the following academic year. Any such application shall be made on the form prescribed within two weeks of the first day of the candidates' absence from any examination. Any supplementary examination shall be part of that academic year's examinations, and the provisions made in the regulation is for failure at the first attempt shall apply accordingly.
- (e) Candidates shall not be permitted to repeat a course for which they have received a D grade or above for purpose of upgrading.
- (f) Candidates are required to make up for failed courses in the following manner:
- undergoing re-assessment/ re-examination in the failed course to be held no later than the end of the following semester (not including the summer semester); or
 - re-submitting failed coursework, without having to repeat the same course of instruction; or

- (iii) repeating the failed course by undergoing instruction and satisfying the assessments; or
 - (iv) for elective courses, taking another course in lieu and satisfying the assessment requirements.
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Discontinuation

- BP8** Candidates shall normally be recommended for discontinuation of their studies if they have:
- (a) failed to complete successfully 36 or more credits in two consecutive semesters (not including the summer semester), except where they are not required to take such a number of credits in the two given semesters; or
 - (b) failed to achieve an average semester GPA of 1.0 or higher for two consecutive semesters; or
 - (c) exceeded the maximum period of registration specified in BP2 of the regulations of the degree; or
 - (d) failed in a core or pharmacy elective course three times.
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Requirements for graduation

- BP9** To be eligible for the award of the degree of Bachelor of Pharmacy, candidates shall have:
- (a) satisfied the requirement in the UG5 of the Regulations for First Degree Curricula; and
 - (b) passed not fewer than 258 credits as specified in the syllabuses, which shall include:
 - (i) 12 credits in English language enhancement, including 6 credits in Core University English¹ and 6 credits in an English in the Discipline course;
 - (ii) 6 credits in Chinese language enhancement²;
 - (iii) 36 credits of courses in the Common Core Curriculum, selecting not more than one course from the same Area of Inquiry within one academic year and at least one and not more than two courses from each Area of Inquiry during the whole period of study; and
 - (iv) successful completion of a capstone experience as specified in the syllabuses of the degree curriculum.
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Award of Degree/ Degree classification

- BP10** (a) The degree of Bachelor of Pharmacy shall be awarded in five divisions: First Class Honours, Second Class Honours Division One, Second Class Honours Division Two, Third Class Honours and Pass. The classification of honours shall be determined by the Board of Examiners in accordance with the following Cumulative GPA scores, with all courses taken (including failed courses) carrying equal weighting:

¹ Candidates who have achieved Level 5** in English Language in the Hong Kong Diploma of Secondary Education Examination, or equivalent, may at the discretion of the Faculty be exempted from this requirement and should take an elective course in lieu.

² Putonghua-speaking candidates must take CUND9002 or CUND9003. Students who have not studied the Chinese language during their secondary education or who have not attained the requisite level of competence in the Chinese language to take CEMD9005 can apply to the Faculty:

- (i) to take credit-bearing Cantonese or Putonghua language courses offered by the School of Chinese (especially for international and exchange students), or
- (ii) for exemption from Chinese language requirement and take an elective course in lieu.

<i>Class of honours</i>	<i>CGPA range</i>
First Class Honours	3.60 – 4.30
Second Class Honours	(2.40 – 3.59)
Division One	3.00 – 3.59
Division Two	2.40 – 2.99
Third Class Honours	1.70 – 2.39
Pass	1.00 – 1.69

- (b) Honours classification may not be determined solely on the basis of a candidate's Cumulative GPA and the Board of Examiners for the degree may, at its absolute discretion and with justification, award a higher class of honours to a candidate deemed to have demonstrated meritorious academic achievement but whose Cumulative GPA falls below the range stipulated in BP10(a) of the higher classification by not more than 0.05 Grade Point.
- (c) A list of candidates who have successfully completed all degree requirements shall be posted on Faculty noticeboards.

**SYLLABUSES FOR THE DEGREE OF
BACHELOR OF PHARMACY
(BPharm)**

Year 1

Course Code	Course Name	Credit
BPHM1111	Anatomy	6
BPHM1112	Perspectives of Biochemistry	6
BPHM1113	Physiology and Pathophysiology I	6
BPHM1121	Medical Statistics and Epidemiology	6
BPHM1122	Pharmacy Practice I	6
CAES1000	Core University English ¹	6
CHEM1042	General Chemistry	6
MEDE0001	Life Science I	6
	Common Core Course ²	24

Year 2

Course Code	Course Name	Credit
BPHM2114	Physiology and Pathophysiology II	6
BPHM2115	Microbiology and Immunology	6
BPHM2123	Pharmacy Practice II	6
BPHM2131	Physicochemical Principles of Pharmacy	6
BPHM2141	Pharmacology and Clinical Pharmacy I	6
BPHM2142	Pharmacology and Clinical Pharmacy II	6
CAES9720	English for Clinical Pharmacy	6
CHEM2042	Principles of Chemistry for Pharmacy Students	6
CHEM2443	Fundamentals of Organic Chemistry for Pharmacy Students	6
	Common Core Course ²	12

Year 3

Course Code	Course Name	Credit
BPHM3132	Dosage Form Design	6
BPHM3133	Medicinal Chemistry for Pharmacy Students	6
BPHM3134	Advanced Pharmaceutics	6
BPHM3143	Pharmacology and Clinical Pharmacy III	6
BPHM3144	Pharmacology and Clinical Pharmacy IV	6
BPHM3145	Pharmacology and Clinical Pharmacy V	6
BPHM3146	Pharmacology and Therapeutics	6
BPHM3151	Principles of Pharmacognosy, Herbal Medicines and Nutraceuticals	6
CEMD9005	Practical Chinese for Pharmacy Students ³	6
CHEM3244	Analytical Techniques for Pharmacy Students	6

¹ Candidates who have achieved Level 5** in English Language in the Hong Kong Diploma of Secondary Education Examination, or equivalent, may at the discretion of the Faculty be exempted from this requirement and should take an elective course in lieu.

² Candidates are required to successfully complete six Common Core Courses, selecting not more than one course from the same Area of Inquiry within one academic year and at least one and not more than two courses from each Area of Inquiry, before the end of the second year of study.

³ Putonghua-speaking candidates must take CUND9002 or CUND9003. Students who have not studied the Chinese language during their secondary education or who have not attained the requisite level of competence in the Chinese language to take CEMD9005 can apply to the Faculty:

(i) to take credit-bearing Cantonese or Putonghua language courses offered by the School of Chinese (especially for international and exchange students), or

(ii) for exemption from Chinese language requirement and take an elective course in lieu.

Year 4

Course Code	Course Name	Credit
BPHM4124	Pharmacy Practice III	6
BPHM4125	Pharmacy Practice IV	6
BPHM4135	Industrial Drug Development	6
BPHM4147	Toxicology and Drug Abuse	6
BPHM4148	Clinical Pharmacy	6
BPHM4149	Clinical Pharmacology and Advanced Clinical Pharmacy	6
BPHM4161	Clerkship and Research Project	12
	Elective I	6
	Elective II	6

Electives

Complete any 12 credits from the following:

BPHM9121	Principles of Public Health	6
BPHM9141	Medical Genetics	6
BPHM9142	Molecular Pharmacology	6
BPHM9151	Cosmetic Science	6
BPHM9152	Chinese Medicine for Pharmacy Students	6

Core Courses

First Year

BPHM1111 Anatomy (6 credits)

The course provides an understanding of the organization and functions of human body in relation to clinical practice. Introduction to human anatomy, cell structure, tissues, embryonic differentiation, epithelia, skeletal and articular structures, gastrointestinal system, cardiovascular system, respiratory system, urogenital system, nervous system, endocrine system. Assessment will be in the forms of continuous assessment (30%) and written examinations (70%).

BPHM1112 Perspectives of Biochemistry (6 credits)

The course aims to give students a biochemical perspective on each of the basic sciences focusing on concepts fundamental to the learning of biochemistry, including chemistry for biochemistry, biology for biochemistry, physics and mathematics for biochemistry. Great discoveries and future challenges for Biochemistry will be introduced. Assessment will be in the form of continuous assessment (100%).

BPHM1113 Physiology & Pathophysiology I (6 credits)

This course aims to explain the normal functioning of human body and abnormal changes in disease states. Functional significance of cells, organs and systems; homeostasis, membranes, excitable tissues, body fluids, cardiovascular system, autonomic nervous system, renal system, gastrointestinal system, endocrine system. Assessment will be in the forms of continuous assessment (30%) and written examinations (70%).

BPHM1121 Medical Statistics and Epidemiology (6 credits)

This course introduces students the principles of statistical analysis, epidemiologic concepts and the design of epidemiologic study. Statistical methodologies include probability distribution, normal distribution, logic in statistical inference, significance test, regression analysis, correlation and non parametric methods. Epidemiology includes the measures of the distribution and determinants of disease, reliability, validity, bias, confounding interactions, causality, screening, vital statistics, and burden of disease. Study designs include cross-sectional studies, ecological studies, cohort studies, case-control studies, intervention studies, and meta-analysis. Assessment will be in the forms of continuous assessment (30%) and written examinations (70%).

BPHM1122 Pharmacy Practice I (6 credits)

This course is designed to introduce the foundational concepts of pharmacy practice and the roles of pharmacists in healthcare system. The course also introduces the concept of good dispensing practice and provides dispensing practice of simple liquid and solid dosage forms, eye and ear products, parenteral products and cytotoxic drug reconstitution. Development of pharmacy, concept of pharmaceutical care, roles of pharmacists, basic legal aspects of dispensing prescriptions, basic dispensing technique are also covered. Assessment will be in the forms of continuous assessment (30%) and written examinations (70%).

CAES1000 Core University English (6 credits)

The Core University English (CUE) course aims to enhance first-year students' academic English language proficiency in the university context. CUE focuses on developing students' academic English language skills for the Common Core Curriculum. These include the language skills needed to understand and produce spoken and written academic texts, express academic ideas and concepts clearly and in a well-structured manner and search for and use academic sources of information in their writing and speaking. Students will also complete four online-learning modules through the Moodle platform on academic grammar, academic vocabulary, citation and referencing skills and understanding and avoiding plagiarism. This course will help students to participate more effectively in their first-year university studies in English, thereby enriching their first-year experience. Assessment is based on 60% coursework and 40% examination.

CHEM1042 General Chemistry (6 credits)

This course aims to provide students with a solid foundation of the basic principles and concepts of chemistry. It also provides students with hands-on training of basic laboratory skills and techniques including volumetric analysis, preparation, purification and characterization of chemical substances and some basic instrumental methods. Students will be equipped with a good foundation of theoretical and practical knowledge and skills for further studies in Chemistry. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

MEDE0001 Life Science I (6 credits)

This course presents an overview and an understanding of the basic mechanisms underlying life processes. Topics include chemistry of life – pH, water, etc.; fundamental bioenergetics; biomolecules and their functions; intermediary metabolism; enzymes and coenzymes; nucleic acids and genetic information. Assessment will be in the forms of continuous assessment (30%) and written examinations (70%).

Common Core Course (24 credits)

Second Year

BPHM2114 Physiology and Pathophysiology II (6 credits)

This course provides information on the normal functioning of various body systems and the presentations in disease states. Physiology and pathophysiology of central nervous system, musculoskeletal system, haematology and immune systems, respiratory system, urogenital system and reproductive system; metabolic rate, body temperature regulation. Assessment will be in the forms of continuous assessment (30%) and written examinations (70%).

Prerequisite: Physiology and Pathophysiology I

BPHM2115 Microbiology and Immunology (6 credits)

This course offers an overview of the human immune system, as well as aspects of microbiology and infection relevant to pharmacy. It provides an understanding on the fundamentals of immunological cells and molecules, antigen recognition, and cellular pathways during immune responses. The pathology of immunological diseases and drugs affecting the immune system will also be covered. Basic pharmaceutical microbiology on medically important bacteria, viruses, fungi, and parasites is introduced. Infections by these organisms, their diagnosis, and control are emphasized. Aseptic techniques, sterilisation, and cleanroom practices will be introduced. Relevant aspects of microbiology in the pharmaceutical industrial setting will also be covered. Assessment will be in the forms of continuous assessment (30%) and written examinations (70%).

BPHM2123 Pharmacy Practice II (6 credits)

This course spells out various laws and codes of practice in the regulation of pharmaceuticals and the pharmacy practice in Hong Kong. The topics include the functions of Pharmacy and Poisons Board, legal classification of pharmaceutical products, control and supply of antibiotics, registration of pharmaceutical products and substances, registration of pharmaceutical products and substances, supply and storage of medicine in institutions, lister seller of poisons, authorized seller of poisons, retail sale of poisons, undesirable medical advertisement ordinance, wholesale of poisons, import and export of pharmaceutical products, control of dangerous drugs, pharmacy ethics. Assessment will be in the forms of continuous assessment (20%) and written examinations (80%).

Prerequisite: Pharmacy Practice I

BPHM2131 Physicochemical Principles of Pharmacy (6 credits)

This course is aimed to provide an introduction to the physicochemical principles underlying the design and preparation of dosage forms. Introduction to preformulation, solid states, solubility and solutions, partitioning, surfactants and micelles, disperse system and colloidal stability, suspensions, emulsions, semi-solid dosage form, rheology, polymers and drug stability. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

BPHM2141 Pharmacology and Clinical Pharmacy I (6 credits)

This course is the first in a five-part series on Pharmacology and Clinical Pharmacy. It will address the pharmacology and appropriate clinical use of agents used in the treatment of various common

chronic and acute conditions. Course addresses medical conditions related to cardiology, gastroenterology, pulmonary, endocrinology, neurology and immunology. Principles of pharmacology that promote the understanding and rational approach to therapeutics will be covered. Emphasis is placed on the considerations for the drug therapy used, therapeutic goals, plans of treatment, dosage regimens, therapeutic alternatives and therapeutic endpoints. The goal of the course is to enable the student to assist in the development of the safest and most rational plan of drug therapy for a given patient. The course fosters critical thinking through case discussions; problem-based learning; and formulating differentials diagnoses, and management strategies of specific medical problems. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

BPHM2142 Pharmacology and Clinical Pharmacy II (6 credits)

This course is a continuation of BPHM2141 Pharmacology and Clinical Pharmacy I. This course will build upon previous courses to develop the student's knowledge base of common human disorders and their therapies. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

CAES9720 English for Clinical Pharmacy (6 credits)

The overall aim of this course is to develop students' communicative ability in order to enable them to meet the demands of drug information delivery in pharmacy contexts. The course focuses mainly on common communication genres in drug information, and the effective communication of drug information to different target audiences in different contexts, in oral and written form. Students will learn to apply citation and referencing skills to the compilation of drug information documents based on research and pharmacy-related publications. Students will also learn essential word parts in medical terminology, and apply word knowledge and strategies for learning new terms and their pronunciation. Assessment will be in the form of continuous assessment (100%).

CHEM2042 Principles of Chemistry for Pharmacy Students (6 credits)

This course is designed to introduce basic principles of chemistry to students. Course Contents include Gas Laws, thermodynamics, physical properties of liquid and gases; Chemical Kinetics: rate of reactions, effect of temperature, orders of reactions, rate laws, reaction mechanism, experimental measurement of reaction rates, enzyme kinetics, enzyme inhibition; applications in pharmacokinetics Chemical Equilibrium; Acids and bases: pH values in aqueous solution, importance in biological systems, diprotic and polyprotic acids, activity; Basic Spectroscopy and Spectrometry Techniques and their applications: UV/Visible absorption spectroscopy; NMR spectroscopy; Mass Spectrometry. Assessment will be in the forms of continuous assessment (25%) and written examinations (75%).

CHEM2443 Fundamentals of Organic Chemistry for Pharmacy Students (6 credits)

The major objective of this course is to give students a basic understanding of organic chemistry, especially in the context of daily life. This will be achieved through the introduction of the chemistry of organic functional groups that form the basis of organic molecules. The concepts presented in the lectures will be reinforced by a series of laboratory experiments. The chemistry of organic functional groups such as alkenes, alkynes, alkyl halides, alcohols, aldehydes, ketones, carboxylic acids and their derivatives, and amines will be discussed, as will the general concepts of molecular structure, conformation and stereochemistry. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

Common Core Course (12 credits)

Third Year

BPHM3132 Dosage Form Design (6 credits)

This course provides students with an understanding of the formulations of solid dosage form, and provides an in-depth knowledge in the rational design of drug delivery systems. Particle characterisation, powder processing, tablets, capsules, modified release dosage form, principles of drug delivery, parenteral delivery, pulmonary delivery, topical delivery, transdermal delivery, vaginal and rectal delivery. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

Prerequisite: Physicochemical Principles of Pharmacy

BPHM3133 Medicinal Chemistry for Pharmacy Students (6 credits)

This course builds on previous knowledge in organic chemistry and analytical chemistry and extends it to drug discovery, design, and development. It introduces how the physico-chemical properties of drugs are related to the integrations of drugs with their targets and discusses how to improve structure-activity relationship in order to improve drug-biomolecule interactions, drug metabolism and drug delivery. This course includes practical courses and PBL sessions in order for students to apply their knowledge to historical developments of drugs. Assessment will be in the forms of continuous assessment (25%) and written examinations (75%).

Prerequisite: Principles of Chemistry for Pharmacy Students and Analytical Techniques for Pharmacy Students

BPHM3134 Advanced Pharmaceutics (6 credits)

This course focuses on the advanced drug delivery systems and industrial pharmaceutics. Advanced drug delivery system, applied pharmacokinetics, optimization of pharmaceutical process and products, nuclear pharmacy, patents and intellectual property rights, quality control of pharmaceutical product, design of pharmaceutical plant, good manufacturing practice, regulation affairs and documentations, pharmaceutical packaging. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

Prerequisite: Dosage Form Design

BPHM3143 Pharmacology and Clinical Pharmacy III (6 credits)

This course is a continuation of BPHM2142 Pharmacology and Clinical Pharmacy II. This course will build upon previous courses to develop the student's knowledge base of common human disorders and their therapies. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

BPHM3144 Pharmacology and Clinical Pharmacy IV (6 credits)

This course is a continuation of BPHM3143 Pharmacology and Clinical Pharmacy III. This course will build upon previous courses to develop the student's knowledge base of common human disorders and their therapies. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

BPHM3145 Pharmacology and Clinical Pharmacy V (6 credits)

This course is a continuation of BPHM3144 Pharmacology and Clinical Pharmacy IV. This course will build upon previous courses to develop the student's knowledge base of common human disorders and their therapies. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

BPHM3146 Pharmacology and Therapeutics (6 credits)

The course is designed to augment coursework previously encountered in Pharmacology and Clinical Pharmacy and other courses of BPharm programme in which the role of clinical pharmacists will be discussed in greater details. It further develops the students' knowledge base in core clinical pharmacy subjects, strengthens the written and oral communication skills and builds up confidence in order to provide pharmaceutical care to patients. It enables students to develop a critical awareness of current problems and/or new insights in professional pharmacy practice. Moreover, it encourages students to identify and set up individualized learning objectives and approaches for learning and development which is sustainable beyond the programme of study. Assessment will be in the forms of continuous assessment (30%) and written examinations (70%).

BPHM3151 Principles of Pharmacognosy, Herbal Medicines and Nutraceuticals (6 credits)

This course broadens the horizon of students in the field of, and provides them with background knowledge of, herbal medicines and nutraceuticals. Phytochemistry, pharmacology of phytochemicals such as alkaloids, phenolic glycosides, volatile oils, terpenoids and carbohydrates; therapeutic uses, adverse effects and drug interactions of common herbal medicines, nutrients, dietary supplements and functional food; safety issues and quality control of herbal medicines and nutraceuticals. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

CEMD9005 Practical Chinese for Pharmacy Students (6 credits)

This course is designed specifically to raise the students' level of proficiency in the use of the Chinese language in the pharmacy profession. It aims at sharpening the students' skills both of writing documents (such as letters, pamphlets, newspaper and magazine columns) and of effectively communicating with patients. Emphasis is placed on how to use Chinese pharmaceutical terms in a precise and concise manner. Common technical terms frequently used in the official Chinese Pharmacopoeia will also be brought to the attention of the students so as to enhance their ability to comprehend pharmacological writings in Chinese. There are also drilling practices to familiarize the students with the simplified forms of some basic Chinese medical terms. Assessment will be in the forms of continuous assessment (50%) and written examinations (50%).

CHEM3244 Analytical Techniques for Pharmacy Students (6 credits)

The course covers theories and practicals on the structural determination of pharmaceuticals using various qualitative or quantitative analytical equipments. Ultraviolet/visible and infra-red spectrophotometry, nuclear magnetic resonance, mass spectrometry, chromatography, atomic absorption, extraction and separation methods, RT-PCR, Western blotting, ELISA, amino acid sequencing, pharmacopoeial standard, quality assurance. Assessment will be in the forms of continuous assessment (25%) and written examinations (75%).

Fourth Year

BPHM4124 Pharmacy Practice III (6 credits)

The course discusses the pharmacist's role in the assessment of minor medical problems, health screening and patient education. Students will learn how to apply the process of pharmaceutical care with respect to treating patients with over-the-counter medications, non-prescription drugs and advising patients on appropriate self-care. The course also emphasizes on helping students to build up effective communication skills in pharmacy practice. Assessment will be in the forms of continuous assessment (25%) and written examinations (75%).

Prerequisite: Pharmacy Practice II

BPHM4125 Pharmacy Practice IV (6 credits)

The purpose of this course is to help student pharmacists master pharmacy management skills for community pharmacy practice. Particular focus is given to financial management, services marketing, personnel management, decision-making, determining pharmacy staff requirements, interviewing and selection techniques, developing professional competencies, evaluation of job performance, improving work environment to enhance patient care, financial and inventory management, budgeting, management and prevention of medication error. The concept of social pharmacy and influence of public health policy on pharmacy practice are also introduced. Assessment will be in the forms of continuous assessment (25%) and written examinations (75%).

BPHM4135 Industrial Drug Development (6 credits)

This course is provided to give knowledge to pharmacy students of steps needed for a drug to become registered. This will first start by discovery of new drug, preclinical tests and clinical trials. All these steps will be detailed in order for student to know how safety, efficacy and quality of drugs are evaluated all along the development. Assessment of the toxicity of the drug would be discussed. This would be applied to the field of small molecule drug but also to biopharmaceuticals. Assessment will be in the forms of continuous assessment (30%) and written examinations (70%).

BPHM4147 Toxicology and Drug Abuse (6 credits)

This course provides students with an understanding of the toxicological problems encountered in clinical practice, drug development and medical research. Introduction to the biotransformation and toxicity of drugs, carcinogenicity, drug addiction and withdrawal syndrome; physiological, pharmacological and sociological consequences of drug abuse; treatment regimens of drug abuse. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

BPHM4148 Clinical Pharmacy (6 credits)

This course builds upon the skills learned earlier in the Pharmacology and Clinical Pharmacy series. It facilitates the development of pharmaceutical care skills through students' participation in patient care initiatives that contribute to the role of pharmacists in health care. Emphasis is on developing these skills: patient data collection, medication assessment, pharmaceutical care plans involving evidence-based recommendations, chart notes, case presentations, journal club, and written and verbal communications skills. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

BPHM4149 Clinical Pharmacology and Advanced Clinical Pharmacy (6 credits)

This clinically orientated course provides students with the chance in understanding the importance of clinical pharmacology in therapeutics and the clinical role of pharmacists in more advanced aspects of therapeutics, especially in special populations such as paediatric, geriatric or palliative patients. Skill development for advanced drug therapy problem identification, assessment and plan resolution for patients will be discussed. The course fosters critical thinking through case discussions; problem-based learning and formulating differentials, diagnoses, and management strategies of specific medical problems. Students work in small group settings to develop problem solving and decision making skills. Case studies will increase in complexity each semester. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

BPHM4161 Clerkship and Research Project (12 credits)

Students will be expected to complete the training in clerkship programme and finish a project under the supervision of staff in the Faculty. The aim of the clerkship programme is to allow students to gain experience, professional competence and confidence, which will facilitate student's graduate career. Students will be trained in community pharmacy, hospital pharmacy and pharmaceutical industry; and complete the profession-related experiences under the supervision of preceptors. The area of research project may include pharmaceutics, pharmacy practice, clinical pharmacy, pharmacology, and other areas of interest between supervisors and students. Assessment will be in the form of continuous assessment (100%).

Elective Courses (Complete any 12 credits from the following)

BPHM9121 Principles of Public Health (6 credits)

The course is designed to develop the knowledge of public health and the skills necessary for evaluation of economic, clinical and humanistic outcomes of medical treatment. Concepts and determinants of public health, measurements of health, control measures for prevention of disease, application of pharmacoeconomics in optimal healthcare resource allocation, appropriateness and quality of pharmaceutical care, respective roles of healthcare professionals in patient care, decision making in pharmaceutical care practice sites, public policies, influence of healthcare-related organizations. Assessment will be in the forms of continuous assessment (50%) and written examinations (50%).

BPHM9141 Medical Genetics (6 credits)

This course introduces the concepts in pharmacogenomics and pharmacogenetics such that these skills can be applied in therapy optimization. Human genetics and genomics, gene polymorphism affecting drug response, pharmacogenetics, pharmacoproteomics, genetic diseases, genetic engineering, gene therapy. Assessment will be in the forms of continuous assessment (20%) and written examinations (80%).

BPHM9142 Molecular Pharmacology (6 credits)

This advanced course in pharmacology focuses on the mechanisms of drug action at molecular level. Regulation of gene transcription, G-protein coupled receptors, ligand-gated ion channels, voltage-gated ion channels, osmolyte or mechanosensitive channels, transient receptor potential channels and gap junction channels, receptor enzymes, second messengers system, regulation of signaling pathways, receptor internalization and alternative signaling pathways. Assessment will be in the forms of continuous assessment (70%) and written examinations (30%).

BPHM9151 Cosmetic Science (6 credits)

This course provides scientific information on the formulation of different cosmetic preparations, and examines their uses, principles of action, safety and efficacy. Anatomy and physiology of skin, hair and nails; formulation of cosmetic products, physico-chemical tests of raw materials and finished products, quality control, safety and stability of finished products, assessment of efficacy. Assessment will be in the forms of continuous assessment (60%) and written examinations (40%).

BPHM9152 Chinese Medicine for Pharmacy Students (6 credits)

Although Chinese Medicine is categorized as a complementary health system in Western countries, it is an important form of primary care in many Asian countries. In China, Chinese Medicine has developed over a long period of more than 2000 years into a unique medical system with specific theories and guiding principles to diagnose and cure human illnesses. As Chinese Medicine has always enjoyed popularity in the Chinese communities and is widely used in Hong Kong, it is important for pharmacists, who are trained in modern Western medicine, to have a better appreciation and understanding of the roles played by these traditional practices in the prevention and treatment of human diseases in our society. Assessment will be in the forms of continuous assessment (40%) and written examinations (60%).

Prerequisite: Principles of Pharmacognosy, Herbal Medicines and Nutraceuticals