Praise be to Allah who taught man what he did not know and guided His servants through knowledge to the path of piety and obedience to Him. He Himself says in the Holy Book: Only those of his servants who are endowed with knowledge truly fear Allah. (35:28). And Allah's peace and blessing be upon Prophet Muhammad who taught humanity all things good, and guided it to righteousness and piety.

H. H. Shaikh Khalifa Bin Zayed Al Nahyan
President of the United Arab Emirates

H. H. General Shaikh Mohammad Bin Rashid Al Maktoum
Vice President and Prime Minister of the
United Arab Emirates and Ruler of Dubai

Crown Prince of Dubai

H. H. Shaikh Hamdan Bin Mohammed Bin Rashid Al Maktoum

Haji. Saeed Bin Ahmed Al Lootah

Founder and Chairman

Board of Trustees

Eng.Yahya Saeed Al Lootah

Vice Chairman,

Member Board of Trustees

Index

Haji Saeed Bin Ahmed Al Lootah

The Founder and Chairman of Dubai Pharmacy College

Founder and Chairman **Haji Saeed Ahmed Al Lootah** is famous for his diverse and successful business ventures, non-profit educational institutions, entrepreneurship, veracity as well as its profound dedication to corporate citizenship and sustainable development. His success spans across key business sectors from construction, real estate and energy conservation, to financial services, applied research, ICT, education, hospitality, media and healthcare among others.

With the enduring values of education, cooperation and economy which set the foundations of his work, Dubai Pharmacy College was established in 1992. The first pharmacy college, accredited by the Ministry of Higher Education and Scientific Research, UAE, is the result of single minded dedication of this great visionary.

His earlier educational ventures of importance and repute are- The Islamic School for Training and Education, Dubai Medical College for Girls, Dubai Institute for Environmental Research and Dubai Medical Centre for Treatment and Research.

Thanks to his vision and leadership, Dubai Pharmacy College continues to demonstrate unique values that extend well beyond its functional benefits creating greater economic, social and environmental benefits for people in the United Arab Emirates and beyond.

PREFACE: an insight into Dubai Pharmacy College

Prof. Dr. Saeed Ahmad Khan

Dean, Dubai Pharmacy College

This is a challenging time to enter the pharmacy profession. With each passing year, the number of prescriptions increases and so does the role of a pharmacist. Welcome to Dubai Pharmacy College that offers an absolutely first-rate B.Pharm program, and so much more, all built on a tradition of excellence. That tradition is very long indeed.

Established in 1992 by Haji Saeed Ahmed Al Lootah, DPC offered the first B.Pharm degree program in the Gulf region. In recognition, our College is accredited and licensed by the Ministry of Higher Education and Scientific Research, UAE in 1998. So, the Degree program has worldwide recognition. It is also endowed with the Dubai Quality Appreciation

The modern facilities provided in the classrooms and, teaching and research labs would be a solid atmosphere for students who wish to study in pursuing a career as pharmacists who hold their own firm opinions based on scientific knowledge and researchers leading the field of Pharmaceutical Science and Life Science.

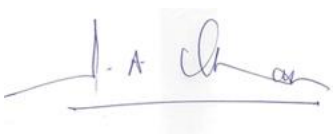
The curriculum has been designed to integrate the natural and social sciences with practice experience so that students will be able to learn, remember, and apply what they have been taught. Graduates of the DPC program will learn to work collaboratively with other healthcare practitioners to help patients manage their medication regimens.

Early practice experiences will help DPC students learn to communicate with patients, solve problems related to medications, and manage themselves and others in a practice environment. The practice experiences will become increasingly more challenging as students move through the student-centered curriculum. The fourth year will be entirely experiential. Students will complete over 900 hours of Professional Practice Experience (PPE) in community pharmacies, hospitals and pharmaceutical industries during their four years of study, enough to prepare them to enter practice upon graduation.

Every aspect of the teaching and learning processes will be continuously assessed to ensure that students are learning and instructors are teaching appropriately. Students, with the help of faculty advisors, will prepare Graduation Research Project portfolio to showcase their best work and document their progress in mastering the program's educational outcomes.

Dubai Pharmacy College is proud of its tradition of close faculty student relations. We welcome all of you who have a strong will to fulfill your dreams as competent and successful healthcare providers. I assure, DPC students will be well prepared to help patients manage their medication regimens and improve their quality of life.

Around the globe we have more than 600 alumni. Most of them are well placed or working towards higher degree in the US, UK, Canada, India, Syria, Egypt, Sudan - this stands a testimony to all our accomplishments.



DUBAI - A GREAT PLACE TO LIVE AND LEARN

Dubai, the emerging business capital of the world, is the second largest of the seven Emirates. Due to its strategic geographical location, situated between the Mediterranean Sea and the Indian Ocean with its links to countries in the Gulf region, it has visitors and entrepreneurs from all over the world.

Dubai, which until recently was a famous commercial haven has now developed into an important cultural and educational centre as well. Earlier known to be the best seat for secondary education, has now excelled as a centre for higher education; providing opportunities for courses in science, technology, management etc. Fortunately for educators , the United Arab Emirates have come forward to support their educational aspirations by allocating funds for the development of educational avenues and instituting scholarships and awards for meritorious students, educationists and scientists. Encouraged by this a number of private philanthropic organizations have shown keen interest to transform Dubai into an important destination for higher education.

Fact File of Dubai Pharmacy College

Study Program of the College:

Course offered	**BPharm**
Degree Title	**Bachelor of Pharmacy**
Type and Duration	**Full-time, 4 years**
Academic year	**Mid-August to Mid-July**
Maximum Registration Period	**6 years**

The Vision, Mission, Goals & Objectives of the College

Vision

To serve the healthcare community by nurturing competent and professional pharmacists while promoting a learning environment that fosters innovation, leadership, continued professional development and quality assurance, making DPC one of the leading institutions for the pharmacy education in the world.

Mission

DPC is committed to providing an accredited pharmacy education that incorporates the best professional practice experience and a learning environment, both inside, and outside the classroom that fosters Islamic values while promoting high levels of student achievement, consistent with the highest standards of academic excellence.

Institutional Goals & Objectives

Goal # 1: Maximize a campus culture in which all students can achieve their potential based on Islamic morals and principles, helping them develop understanding, skills, attitudes, and values essential for success in life and become responsible citizens.

Goal #2: Impart an advanced, intensive and comprehensive curriculum based on international professional standards that emphasize on professional practice experience. Promote critical knowledge, skills, and competencies necessary to begin a managed care pharmacy career in pharmacy, industry, hospitals and other health care systems.

Goal # 3: Ensure optimum use of well–equipped classrooms, library, laboratories and IT facilities to impart personalized, self-learning and problem-solving instruction delivery

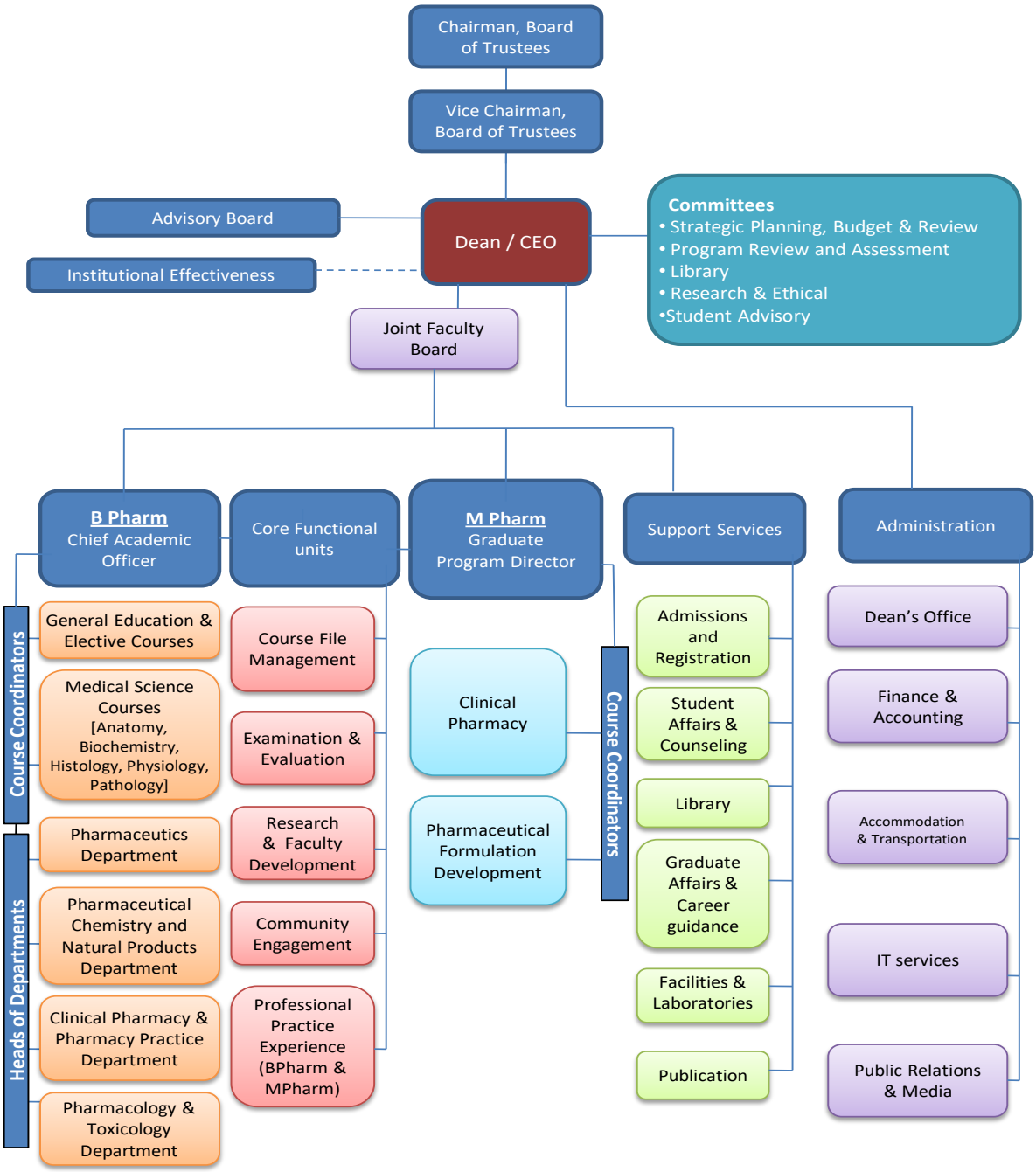
Goal # 4: Foster a safe environment for the faculty and students that is conducive to research and scholarly activities.

Goal #5: Comply with International Standards in Examination System

Goal # 6: Maintain a lifelong relationship with alumni through opportunities that promote interaction and involvement with the College for the benefit of the community.

Goal # 7: Ensure all processes are synergistic, effective and directed towards continuous improvement, by achieving the goals and objectives of the Units of the College, and the Mission and Vision of the College as a whole.

Organization Structure of DPC



1. Program

INSTITUTION:	**Dubai Pharmacy College, Dubai, UAE**
DEGREE:	**Bachelor of Pharmacy**
LENGTH & MODE:	**Four academic years, Full time**
MAXIMUM REGISTRATION PERIOD:	**6 years**
Chief Academic Officer:	**Prof. Naglaa Gamil**

2. Admission Requirements

Admission to DPC is based on academic qualifications as shown in the table below. Prospective students can find information on application procedures as well as a link to the application at the college web site at www.dpc.edu. Inquiries concerning particular degree programs or courses of instruction should be addressed to the Chief Academic Officer or to the Dean.

Entry requirement	Higher Secondary, Intermediate (Pre- Medical)
Other qualifications accepted	**IGCSE, GCSE , GCE** – Minimum of 12 years of schooling; School Leaving Certificate must be provided. – All applicants must have the following subjects at GCSE level, at grades BBCCC or above (in any order): Biology (or Human Biology), Chemistry, English Language, Mathematics (or additional Mathematics or Statistics), Physics. – Two As-levels (at grade BC) in Biology and Chemistry. **International Baccalaureate** Diploma showing that student has success-fully passed grade 12 with at least 6 subjects out of which three at higher level (**minimum grade of 80 %).** Candidates should have obtained: three subjects including chemistry or biology and one other science or mathematical subject at higher level, and three subjects at subsidiary level including chemistry or biology, if not offered at the higher level.

	European Baccalaureate Candidates should have passed chemistry and biology. Minimum grades of 85 per cent are required in each of these two options and a grade of 75 % is required overall. Good grades at GCSE level or at equivalent examinations are required in Physics, Mathematics and English language if they are not offered as part of the Baccalaureate. **American-style High School** Successfully passing grades (l0, 11, and 12) with a minimum of 5 subjects in each grade. Minimum (equivalent to grade B) is required. Only subjects classified as academic are considered in the calculation of the CGPA. Other high school certificates can be considered on individual bases.
Minimum average % of marks	80%
Stream of study	Science – Physics, Chemistry, Biology or Mathematics recognized by Ministry of Education, U.A.E.
English Proficiency Requirements **Entry eligibility**	– Internet Based Test (IBT) TOEFL 61 out of 120 TOEFL(PBT) will not be accepted – International English Language Testing System (IELTS-Academic) 5.0 – Cambridge English: Advanced (CAE) with a test score of 41 Passing interview

Applications are initially reviewed by the college and applicant will be called for an interview. Final decisions rest with the college, which, after considering the recommendation of the department concerned, will notify the applicant of the decision.

Candidates should submit certificate in proof of having good character and provide evidence for their emotional, social and academic maturity from the Head of the Institution last attended.

DPC Conditional Admission

The DPC provides **Exam Preparation courses** for TOEFL/IELTS which has helped many students to obtain conditional admission to B. Pharm program. Conditional admission provides the student with an assured admission to B. Pharm program once she has meet the minimum requirement for English-language along with other specific requirements of the College.

Eligibility

To be eligible for the Conditional Admission, students must enrol and study in Exam Preparation courses for TOEFL/IELTS: 4skill- based teaching hours per week during the first semester. Students who qualify for conditional admission will have to sign a note of undertaking of conditional admission that specifies the conditions that she must meet the minimum English Language Proficiency by the end of first semester. In case of not achieving the required score she will be turned out of the College.

Note: Conditional admission means that students are limited to enrolling in 15 credit hours for the first semester and cannot enter second semester without the required minimum score of TOEFL/ IELTS/CAE.

TRANSFER ADMISSION POLICIES

The College also welcomes applications from candidates studying with other educational institutions in B.Pharm. course who wish to transfer to DPC. It may be possible to grant exemption from earlier part of the degree course in recognition of a candidate's success in her previous course of study.
The following are the necessary conditions for transfer to the DPC from other Pharmacy Colleges:

1. Dubai Pharmacy College (DPC) accepts transfer of students from accredited College with a curriculum that is comparable to that offered at DPC.
2. Students must meet the English language proficiency requirements such as minimum TOEFL score of (61 IBT) or 5.0 in IELTS.
3. The student must provide a letter of application to the Dean of the College specifying reason (s) for requesting transfer and desired date of transfer.
4. Dubai Pharmacy College requires applicants to submit their transcripts for evaluation of transferable subjects /teaching hours from previous College experiences.
5. No student who has been dismissed from any Pharmacy College will be eligible for transfer to DPC.
6. All applicants must provide conduct certificates from the Pharmacy College where they are currently enrolled.
7. All applicants should contact the **Dean's Office** to inquire about having their transcripts reviewed.
8. **The student transferring from another accredited college must be in a good academic standing (a minimum CGPA of 2.0, C grade, on a 4.0 scale or equivalent).**
9. **Student applying for transfer to DPC must study more than 60% of the syllabus of B. Pharm at DPC.**
10. The final decision for approval of transfer will be made by the Dean after review of the transfer request by the Chief Academic Officer of the College.
11. Transfer of students is not allowed after second year.
12. Before considering any application for transfer, existence of an appropriate seat for the student should be considered.
13. Before attending Dubai Pharmacy College, attested records from the previous College and higher secondary school should be submitted to the Dean's secretary.

ADMISSION RULES FOR DIPLOMA IN PHARMACY & SCIENCE GRADUATES Diploma in Pharmacy holders will be admitted in second year of B.Pharm, if they meet the following requirements:

1) She should have passed the qualifying examination viz. Higher Secondary/Intermediate/10+2/GCE-A level "12 Grade" or equivalent with science subjects (Physics, Chemistry, Biology or Mathematics) from a school recognized by Ministry of Education, U.A.E. with not less than 70% marks in aggregate.
2) She should have passed Diploma in Pharmacy **with a good academic standing (a minimum CGPA of 2.0, C grade, on a 4.0 scale or equivalent).**
3) She should apply for admission to BPharm course in DPC within five years after obtaining the Diploma in Pharmacy and also she should be working in the field related to Pharmacy.
4) Candidates should submit certificate in proof of having a good character and provide evidence for their emotional, social and academic maturity from the Head of the Institution last attended.
5) Evidence of proficiency in English language should also be provided.

Science graduates and graduates in Medicine, Health Sciences, Dentistry and Veterinary Sciences can also be admitted to B. Pharm**. course if they meet the following requirements:**

1) She should have passed the qualifying examination viz. Higher Secondary/Intermediate/10+2/GCE-A level "12 Grade" or equivalent with science subjects (Physics, Chemistry, Biology or Mathematics) from a school recognized by Ministry of Education, U.A.E. with not less than 70% marks in aggregate.
2) She should have passed Graduate Degree with **a good academic standing (a minimum CGPA of 2.0, C grade, on a 4.0 scale or equivalent).**
3) She should apply for admission in B. Pharm. course in DPC within five years after obtaining her Graduate Degree and also she should be working in the field related to her specialization.
4) Candidates should submit certificate in proof of having a good character and provide evidence for their emotional, social and academic maturity from the Head of the Institution last attended.
5) Evidence of proficiency in English language should also be provided.

Returning Student Readmission Policy:

Students returning from a ***Leave of Absence*** will need to fill out a readmission form available in the Dean's office.

Readmission Form deadlines:

If returning for first semester: Readmission form must be submitted on or before the start of the term.

If returning for second semester: Readmission form must be submitted on or before the first week of second semester of the same year.

Students returning from a ***Leave of Absence*** who have a tuition balance are subject to the rules regarding overdue tuition balances in place at that time. After one year, students will have to re-apply for admission and if applicable, for scholarship.

Students' ***Leave of Absence*** that exceed one calendar year from date of request will have their status changed to "Withdrawal."

Leave of Absence:

Students in good standing may request a ***Leave of Absence***. A leave of absence allows a student to return to the same semester at any registration period for up to one year from the start of the leave without the necessity of re-applying but should fill in the Leave of Absence form. Students on scholarship who are in good academic standing will retain their award when returning to the College from a leave of absence not more than one year. The forms for readmission are available in the Dean's office.

Add/Drop/Withdrawal from Courses

Minimum 16 credit hours are required for registering in a semester. If less than 16 credit hours, a student cannot register for a semester. Credit transfer system is not applicable for regular students as DPC strictly adheres to the time-table schedule. In addition, the students in the regular batch cannot add or drop any regular courses allotted for each semester.

The credit hours students may drop or add a subject/ course (for credit hour students) during the first two weeks of classes with no financial implications, so long as they remain within their allowable full time credit load. (minimum 16/maximum 24 credits). The start and end dates of the "add/drop period" are first and second week of the term.

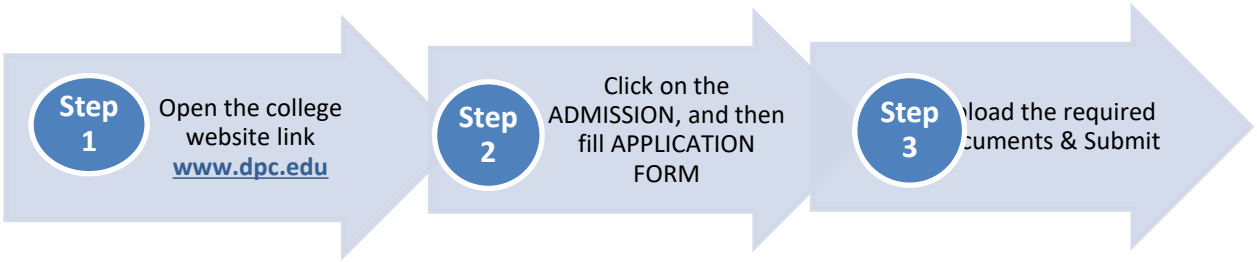
Forms for adding and dropping courses are available at the Office of the Dean. Adding or dropping a course requires the signature of the Chief Academic Officer and the Dean. Such changes must be recorded with the Dean's Office before they become official.

Withdrawal Policy

After the two week add/drop period, and up to the end of the 10th week of a semester, students may choose to withdraw from a course without academic penalty; however, a grade of **W** will appear on the student's transcript. Students may officially withdraw from a course up to the end of the 10th week of the semester. After the 10th week, withdrawals are no longer permitted, except by special permission of the Dean. A withdrawal form must be signed by the Dean.
Note: All withdrawals from course(s) after the fourth week of the term are noted with a grade **"W"** on the transcript.

Online Registration:

New applicants should follow the steps below to register online:



New applicants will be shortlisted and contacted. If you have any questions regarding the system, or should you encounter problems while using the system, call the college reception during office hours.

Registration Procedure:

Registration must be completed by the end of the July of each year. Authority to extend this deadline is vested on the Dean.

The applicant should fill the application form and attach the required documents with 250/- AED and then submit it to Dean's office.

DOCUMENTS required for admission:

The following documents will be required to be submitted along with the application form. The original certificates should be brought in person by the applicant at the time of interview.

1. Provisional certificate of the examination passed (Higher Secondary) on the basis of which admission is sought.
2. Mark-sheet of the examination passed.*
3. Leaving certificate from the school last attended.
4. Six passport size color photographs.
5. Birth certificate.
6. Character certificate from the Head of the Institution last attended.
7. Copy of the passport and resident visa (for expatriate students only).
8. Medical certificate.
9. Document certifying TOEFL/IELTS requirements.

*Note: **School certificates from outside UAE should be attested from place of issue:**

a) Country of Study

- Ministry of Education
- Ministry of Foreign Affairs
- The Embassy

b) UAE

- Equivalency certificate from Ministry of Education

3. Fee Structure

Fees	Total Amount/Year	Mode of Payment
Tuition*	Dhs45,000 Dhs1100/credit hour	Dhs22,500/- at time of admission Four installments
Hostel	Dhs12000/- to 18000/-	Four installments with tuition fees.
Transportation		
Dubai(daily) Sharjah/Ajman(daily)	Muhaisnah/Mezher/Mirdiff/Rashidiya/Twar/Qusais/NahdaDhs3000/- Deira/Bur Dubai/Satwa/Karama/Umm Suqaim/Jumeirah/BarshaDhs4000/- Dhs 5000/-	Four installments with tuition fees.
AbuDhabi, Fujairah, Al Ain, Baniyaas (weekly)	Dhs 5000/-	Four installments with tuition fees.

***NOTE:**
The tuition fees once communicated will remain the same throughout the course for the four year of study.
Transport and Hostel fees are subject to change.

FinancialAid

Dubai Pharmacy College as part of the Board of Trustees keen desire to attract outstanding girls students to the Dubai Pharmacy College, it is hereby decided as follows:

The College awards four scholarships to meritorious students each year who are newly admitted (equivalent to the tuition fee of the 1st year)

- One student is awarded 50% scholarship
- One student is awarded 40% scholarship
- Two students are awarded 20% scholarship each

This scholarship remains with the students all four years if they maintain their merit in each academic year results. If they do not maintain good academic standing then other students with good grades are awarded the scholarship.

Grant of the above mentioned concession shall be subject to the following:

1. Fulfillment of other conditions mentioned in the prevailing rules and regulations.
2. Faithfully adhering to the Islamic educational codes and principles and other rules and regulations in force in the College.
3. The College shall not be bound to continue the concession so granted in case of the students transfer to another College, or any change in her educational progress.

4. Consistently obtaining not less than Excellent (grade) at all levels of studies.
5. Priority for award of the concession shall be given to the candidate scoring the highest marks in the admission to the College.

Refund Policy of Tuition Fees

Dubai Pharmacy College admits only a very limited number of students, so if any student after admission cancels her admission then this will create a vacancy which could have been used by another qualified student. Therefore the College authorities are strict in their action for such students and they will not refund the fees paid at the time of admission until and unless a valid reason is provided for cancellation of admission.

The valid reasons can be:-

1. If a candidate faces visa difficulties from U.A.E. govt. that are out of College Control.
2. If the guardian of the candidate faces sudden employment problems, such as termination, visa cancellation etc.
3. If a candidate is granted a scholarship provided that it occurs after the date of fee payment.

The refund usually is granted to student in first or second week after commencement of academic year to which they are admitted.

Refund Policy of Tuition Fees on Withdrawal:

During the first and second week of the term	100%
During the third week of the term	50%
Fourth week of the term	25%

4. Prospective Careers

Various avenues open to pharmacists in different areas of activity are as follows:

1) **Community Pharmacy (Retail Pharmacy)**
   - Dispensing of prescriptions after review
   - Selection of non-prescription drugs
   - Pharmaceutical care of certain diseases
   - Purchasing, storing and dealing of pharmaceutical products

2) **Hospital Pharmacy (Clinical Pharmacy – Pharmaceutical Care)**
   - Dispensing of prescriptions after review
   - Answering queries through Drug Information Center

- Therapeutic Drug Monitoring
- Dealing with intravenous admixtures
- Pharmaceutical Care (prevents drug interactions and adverse drug reactions, proper use of drug products, ensure compliance, discover and solve adverse drug reactions)
- Production of certain radioactive drug products
- Administration, purchasing and participating in selection of drugs

3) Pharmaceutical Industry

- Synthesis and analysis of raw materials
- Extraction of active ingredients from medicinal herbs, and other natural products
- Production of pharmaceutical products
- Quality Control of pharmaceutical products
- Research and Development
- Marketing and promotion of drugs/Distribution of pharmaceutical products

4) Government Organizations (MOH & DHA)

- Control and auditing of community hospital pharmacies
- Drug Registration and Control
- Defense and Interior Ministry pharmacies
- ADR monitoring

5) Research and Development Centres

- Research on drugs in various research centers
- Research on medicinal herbs, natural products, biotechnology and genetic engineering
- Research on other areas of pharmaceutical sciences

6) Universities and Colleges

- Work as Demonstrators/Teaching Assistants
- Seek higher education to obtain Diploma, Masters and Ph. D. degree

7) Other Careers

- Medicinal Diagnostic Laboratories
- Pharmaceutical Consultation
- Marketing for Drug Products
- Nuclear Pharmacy and Forensic Pharmacy
- Insurance companies

5.BPharm Program

PROGRAM OBJECTIVES

1. Offer a highly motivated educational environment to provide the students with profound knowledge of various fundamental, pharmaceutical and clinical sciences.
2. Develop the ability of the students to utilize the acquired knowledge to contribute productively in various fields of pharmaceutical and clinical settings.
3. Produce graduates with professional skills needed to ensure effective communication with health care members, patients and community following professional code of ethics.
4. Develop a highly competent, responsible, life-long learner pharmacist with the vision of continuous professional development.

PROGRAM OUTCOMES

QF Emirates Level 7	Program outcome: On successful completion of this program the students will be able to:	Learning/ Teaching Methods and Strategies	Types/ Methods of assessment
Knowledge	**A1.** Acquire knowledge and understanding of natural and synthetic drugs, drug isolation, structural design, synthesis, and chemical structural relation with pharmacological activity and toxicity, analysis of drug and pharmaceutical products by qualitative and quantitative methods.	Lectures, Tutorials, Practical, Self-Directed Learning, Seminars, Problem Based Learning	Written Examinations, Practical Reports, Project Report, PBL assessment
	A2. Acquire knowledge of the basic concepts and techniques involved in manufacturing and quality assurance of different pharmaceutical and biotechnology based products considering physicochemical, biopharmaceutical and pharmacokinetics aspects.		
	A3. Gain the comprehensive knowledge of biomedical, pharmacokinetics, pharmacodynamics& toxicological principles of medications appropriate to apply in clinical settings.		
	A4. Understand various concepts, policies and procedures related to pharmacy practice in different clinical settings including hospital and community.		
Skills	**B1.**Acquire the basic skills and techniques involved in drug manufacture and development, drug design and screening, quality control and analysis of pharmaceutical products.	Practical classes, Project Work, Workshops, Problem Based Learning, Case studies, Computer Lab	Oral, poster presentation, Seminars, OSCEs, practical and Case based assessment, Project Report Students Graduation Project
	B2.Communicate effectively orally and in writing and deploy a range of presentation techniques within workplace setting.		
	B3. Interpret prescription orders, integrate the knowledge of biostatistics and clinical calculations in identifying problems with drug therapy, formulate solutions and assess risk associated with the solutions to deliver the best pharmaceutical care to the patients.		

Competencies	C1.Demonstrate the leadership ability and take responsibilities to function both independently and as a member of a team.	Problem Based Learning, Prescription evaluation, Workshops, E-learning, Communication skills classes, Self-Directed Learning	PPE, OSCEs, Written examinations, Calculations in Practice and PBL assessments Students Graduation Project
	C2. Develop self-learning skills, problem solving skills and critical thinking abilities for professional development and become independent life- long learner.		
	C3. Display Islamic behavior, moral and ethical attitudes to practice the profession competently and ethically.		

BPharm Program Objectives mapping against Program Outcomes										
Program objectives	**Program outcomes**									
	Knowledge				**Skills**			**Competencies**		
	A1	**A2**	**A3**	**A4**	**B1**	**B2**	**B3**	**C**	**C**	**C3**
1. Offer a highly motivated educational environment to provide the students with profound knowledge of various fundamental, pharmaceutical and clinical sciences.	√	√	√	√						
2. Develop the ability of the students to utilize the acquired knowledge to contribute productively in various fields of pharmaceutical and clinical settings.					√		√			
3. Produce graduates with professional skills needed to ensure effective communication with health care members, patients and community following professional code of ethics.						√				
4. Develop a highly competent, responsible, life-long learner pharmacist with the vision of continuous professional development.								√	√	√

6.Study Plan for the BPharm Program

Dubai Pharmacy College accepts only female students with General Secondary School Certificate or its equivalent with science subjects (Physics, Chemistry, Biology, or Mathematics) for admission to Bachelor of Pharmacy degree program.

Dubai Pharmacy College grants its students, after successful completion, Bachelor's Degree in Pharmacy (B. Pharm.). The total program of Dubai Pharmacy College extends over four academic years and the maximum course duration to complete the degree within a reasonable time frame of six years.
The academic year starts in September and ends in the third week of July.

- Each academic year is divided into semesters.
- Each semester is composed of twenty two weeks of which 15 weeks devoted to teaching
- Each week has five teaching days which accounts for 30 teaching hours in a week.

Annual vacations are of two weeks at the end of first semester and five weeks at the end of second semester.

	No. of Courses	Credit Hours	%
Elective Courses	3	6	3.5%
General Education Courses	6	10	6%
Core requirement	43	139	81.5%
Professional Practice Experience(PPE)	3	14	8%
Students Graduation Project (GP)	1	2	1%
Total	56	171	100%

	No. courses	Credit Hours	%
Pharmaceutical Science	17	58	42 %
Clinical Science	15	31	22 %
Pharmaceutical Science-Clinical Science	5	18	13%
Basic Biomedical Sciences	8	22	16%
Basic Sciences	3	10	7%
Total	43	139	100%

6.1 Distribution of Courses

First Year – First Semester (2015-2016)			
Subject	**Cr.Hr. Theory**	**Cr.Hr. Practical**	**Total Cr. Hr**
Organic Chemistry-I	3	-	3.0
Anatomy & Physiology-I	3	1	4.0
General Psychology	2	-	2.0
Mathematics	2	-	2.0
English Language & Study Skills	2	-	2.0
Medical Terminology	1	-	1.0
Islamic Culture & Science	2	-	2.0
Islamic Studies	2	-	2.0

First Year – Second Semester (2015-2016)			
Subject	**Cr.Hr.Theory**	**Cr.Hr.Practical**	**Total Cr. Hr**
Organic Chemistry- II	3	1	4.0
Anatomy & Physiology-II	3	1	4.0
Analytical Chemistry	2	1	3.0
Natural Products-I	3	1	4.0
Physical Pharmacy	3	1	4.0
Pharmaceutical Calculations	2	-	2.0
Orientation to Pharmacy	1	-	1.0
History of Pharmacy	2	-	2.0

Second Year – First Semester (2016-2017)			
Subject	**Cr.Hr. Theory**	**Cr.Hr. Practical**	**Total Cr. Hr**
Pharm. & Medicinal Chemistry-I	3	-	3.0
Fundamentals of Pharmacology	3	1	4.0
Biochemistry- I	2	1	3.0
Microbiology- I	2	1	3.0
Pharmaceutics- I	2	1	3.0
Natural Products-II	3	-	3.0

Second Year – Second Semester (2016-2017)			
Subject	**Cr.Hr. Theory**	**Cr.Hr. Practical**	**Total Cr. Hr**
Pharm. & Medicinal Chemistry- II	3	1	4.0
Biochemistry- II	2	1	3.0
Microbiology- II	2	1	3.0
Pharmaceutics- II	2	1	3.0
Pathology	2	1	3.0
Social Behavioral and Ethical aspect in Pharmacy	2	-	2.0

Third Year – First Semester (2017-2018)			
Subject	**Cr.Hr. Theory**	**Cr.Hr. Practical**	**Total Cr. Hr**
Pharmacology & Therapeutics- I	3	1	4.0
Phytochemistry	3	1	4.0
Pharmaceutical Analysis	3	1	4.0
Pharm. & Medicinal Chemistry -III	3	1	3.0
Biopharmaceutics & Pharmacokinetics	3	1	4.0
Basic Genetics	2	-	2.0

Third Year – Second Semester (2017-2018)			
Subject	**Cr.Hr. Theory**	**Cr.Hr. Practical**	**Total Cr. Hr**
Pharmacology & Therapeutics- II	3	1	4.0
Pharmacology & Therapeutics- III	3	1	4.0
Pharmaceutical Technology	3	1	4.0
Pharmacy Practice	3	1	4.0
Pharm. & Medicinal Chemistry-IV	3	-	3.0
Immunology	2	-	2.0
Applied Pharmacokinetics	2	-	2.0
Alternative & Complementary Medicine	2	-	2.0

Fourth Year – First Semester (2018-2019)			
Subject	**Cr.Hr. Theory**	**Cr.Hr. Practical**	**Total Cr. Hr**
Clinical Pharmacy & Pharm. Care	3	1	4.0
Pharmacology & Therapeutics -IV	3	1	4.0
Pharmaceutical Biotechnology	3	-	3.0
Professional Skills in Practice	2	2	4.0
Toxicology	2	-	2.0
Pharmaceutical Management	2	-	2.0
Pharmacy Laws & Drug Regulations	1	-	1.0

Fourth Year – Second Semester (2018-2019)			
Subject	**Cr.Hr. Theory**	**Cr.Hr. Practical**	**Total Cr. Hr**
Pharmacoepidemiology & Pharmacovigilance	2	-	2.0
Pharmacogenomics	2	-	2.0
Hospital Pharmacy	2	-	2.0
Biostatistics	1	-	1.0
Nuclear Pharmacy or Bioassay	2	-	2.0
Integrated Problem Based Learning	1	-	1.0
Graduation Research Project	-	-	2.0
Professional Practice Experience	-	-	14.0

Add/Drop/Withdrawal from Courses

Minimum 16 credit hours are required for registering in a semester. If less than 16 credit hours, a student cannot register for a semester. Credit transfer system is not applicable for regular students as DPC strictly adheres to the time-table schedule. In addition, the students in the regular batch cannot add or drop any regular courses allotted for each semester.

The credit hours students may drop or add a subject/ course (for credit hour students) during the first two weeks of classes with no financial implications, so long as they remain within their allowable full time credit load. (minimum 16/maximum 24 credits). The start and end dates of the "add/drop period" are first and second week of the term.
Forms for adding and dropping courses are available at the Office of the Dean. Adding or dropping a course requires the signature of the Chief Academic Officer and the Dean. Such changes must be recorded with the Dean's Office before they become official.

Withdrawal Policy

After the two week add/drop period, and up to the end of the 10th week of a semester, students may choose to withdraw from a course without academic penalty; however, a grade of W will appear on the student's transcript. Students may officially withdraw from a course up to the end of the 10th week of the semester. After the 10th week, withdrawals are no longer permitted, except by special permission of the Dean. A withdrawal form must be signed by the Dean.
Note: All withdrawals from course(s) after the fourth week of the term are noted with a grade "W" on the transcript.

Leave of Absence:

Students in good standing may request a *Leave of Absence*. A leave of absence allows a student to return to the same semester at any registration period for up to one year from the start of the leave without the necessity of re-applying but should fill in the Leave of Absence form. Students on scholarship who are in good academic standing will retain their award when returning to the College from a leave of absence not more than one year. The forms for readmission are available in the Dean's office.

Returning Student Readmission Policy:

Students returning from a *Leave of Absence* will need to fill out a readmission form available in the Dean's secretary's office.

Readmission Form deadlines:
If returning for first semester: Readmission form must be submitted on or before the start of the term.
If returning for second semester: Readmission form must be submitted on or before the first week of second semester of the same year.

Students returning from a *Leave of Absence* who have a tuition balance are subject to the rules regarding overdue tuition balances in place at that time. After one year, students will have to re-apply for admission and if applicable, for scholarship.
Students' *Leave of Absence* that exceed one calendar year from date of request will have their status changed to "Withdrawal."

6. Course Description for the BPharm Program

Organic Chemistry- I	**Credit Hours: 3+0**
This course describes the basics of organic chemistry as atomic structure, orbital theory, hybridization, bond characteristics and chemical bonding. This course also describes the role of electronegativity on the polarity of chemical bonding, resonance effect, isomerism, and nomenclature of organic compounds.	
Anatomy & Physiology- I	**Credit Hours: 3+1**
The course offers a comprehensive knowledge of the structure and function of the human cell, integumentary, skeletal, muscular and nervous systems. The information offered by the course forms the foundations for further understanding of pharmacology, pathology, pathophysiology, and medicine. It gives the student an opportunity to develop into an independent learner and researcher.	
General Psychology	**Credit Hours: 2+0**
The aim of this course is to provide the students with the knowledge of the basic fundamentals in Psychology. The content of each session is driven by a set of student-centered learning objectives and targeted feedback.	
Mathematics	**Credit Hours: 2+0**
The course will introduce basic mathematical concepts and calculations which are required for the subsequent studies of pharmaceutical and clinical calculations.	
English Language & Study Skills	**Credit Hours: 2+0**
This course is designed to enable the students to achieve oral and written communication skills. The course integrates the language skills with emphasis on writing, and it stimulates students' imagination, and promotes self-expression. Students in this course are trained to apply critical thinking skills to a wide range of challenging subjects from diverse range of topics focusing on healthcare related issues. Course activities include writing various types of academic genre, acquiring vocabulary, and getting involved in group discussions and debates. The course is taught paying attention to small groups. Students, in this course, are assessed by using diverse tools, such as presentations, assignments and exams.	
Medical Terminology	**Credit Hours: 1+0**
Medical terminology is the study of the principles of medical word building to help the student develop the extensive medical vocabulary used in health care occupations. Students receive a thorough grounding in basic medical terminology through a study of root words, prefixes and	

suffixes. The study focuses on correct pronunciation, spelling, abbreviations and use of medical terms.	
Islamic Culture & Science	**Credit Hours: 2+0**
This course covers comprehensive concept of Islamic culture, resources, and its characteristics to appreciate significance of Islam as a practical and universal religion. It shows how religious believes; thoughts and faith can frame people culture. The course is designed to develop the sense of responsibility and belongingness to Islam. In addition, the course focuses on the correlating basic concepts of Islam with science and contributions of Muslims in the development of science especially pharmaceutical sciences. This course has fully recognized and emphasized the need for educational reconstruction in Islamic society for strengthening the foundation of faith as well as to support the rising of generation capable of facing the challenges of moderation and globalization with confidence.	
Islamic Studies	**Credit Hours: 2+0**
The aim of this Islamic studies course is to give the students a comprehensive understanding of the main two sources of Islamic Legislation: Holy Qur'an and sunnah (prophet Mohamed Hadith). This course deals with definition of the Holy Qur'an with an explanation of selected Qur'anic verses, the definition of Sunnah with an explanation of selected Prophet's sayings (Hadith), study sections of the biography of the prophet (PBUH), and the definition of schools of jurisprudence and the reasons for their differences, with an indication of the most important sources and references of Islamic studies.	
Organic Chemistry- II	**Credit Hours: 3+1**
This course describes the structural configuration, physical properties, preparation methods, and chemical reactions/reaction mechanism of aliphatic, aromatic hydrocarbon, substituted hydrocarbons, polynuclear hydrocarbons, esters, ethers, thioethers, alcohols, carboxylic acids, aldehydes, ketones, amines, diazonium salts and heterocyclic compounds. Laboratories include identification of functional groups of different organic molecules and preparation of few selected organic compounds.	
Anatomy & Physiology- II	**Credit Hours: 3+1**
The course offers a comprehensive knowledge of the structure and function of the digestive, blood, cardiovascular, respiratory, renal system, endocrine and reproductive systems. The information offered by the course forms the foundations for further understanding of pharmacology, pathology, pathophysiology, and medicine. It gives the student an opportunity to develop into an independent learner and researcher.	
Analytical Chemistry	**Credit Hours: 2+1**

This course describes the classical analytical chemistry techniques. Topics covered in this course include the statistical evaluation of data, stoichiometry, gravimetric and titrimetric methods of analysis, acid-base chemistry involves in titration, complexation titration, and redox titration.

Laboratory includes practical examples of the methods covered in this course.

Natural Products- I (Pharmabotany)	**Credit Hours: 3+1**

Natural products is a specific discipline taught only at pharmaceutical faculties deals with the versatile studies of drugs and auxiliary substances of biological origin (plant and animal products) used in human and veterinary medicine.

The aim of this course is to provide the students information about the taxonomic classification of the medicinal plants, the part/s used and the morphological and the histological characters of the different plants organs. Also, the student should be aware with the identification of the drugs, in the whole state and in powdered condition. Suitable examples of different medicinal plants organs. Botanical origin, pharmacological uses, folkloric use, contraindication, side effects and chemical tests for each medicinal plant will be also explained to the students.

Physical Pharmacy	**Credit Hours: 3+1**

The course provides the basic understanding of physicochemical principles of dispersion systems (molecular, colloidal and coarse dispersions) such as pH, rheology, surface and interfacial phenomena. Furthermore chemical stability of drugs and drugs solubility, dissolution and are also discussed.

Pharmaceutical Calculations	**Credit Hours: 2+0**

This course aims to provide students with an introductory knowledge in pharmaceutical calculations including medical prescription, systems of measurements, Roman numerals and Latin abbreviations, dose calculation according to the patient's age, body weight and body surface area, calculation of the ratio and proportion, percentage preparations, PPM and units conversion. In addition to dilution and concentration of pharmaceutical preparations, reducing and enlarging formulas, alligation of semisolids and reconstitution of powdered dosage forms.

Orientation to Pharmacy	**Credit Hours: 1+0**

This course introduces to the profession of pharmacy including its history, development, scope of practice, ethical foundations, and different pharmacy profession practice activities in different pharmaceutical fields (community, hospital, industrial, governmental & other areas). This course also prepares the students to the professional aspect of pharmacy including professional conduct, responsibility for self-development. This course also covers the importance of continuous professional development and professional development programs.

History of Pharmacy	**Credit Hours: 2+0**

This course aims to introduce students to the roots and historical development of pharmacy and the important contributions of the ancient people and cultures to the evolution of the profession. Moreover, an important aspect of this course will be discussions concerning the development of critical therapeutic agents that revolutionized the treatment of diseases and how these discoveries affected the pharmacy profession. The student will also be exposed to developmental stages of pharmacy education worldwide and discuss the important factors and events that shaped the profession of pharmacy in Gulf countries particularly in the UAE.

Pharmaceutical & Medicinal Chemistry- I	**Credit Hours: 3+0**

Medicinal chemistry is the application of chemistry in the context of human medicine. This course describes the physiochemical and stereo-chemical aspects of drug action, chemistry of drug and structure activity relationship of several classes of drugs that affecting cholinergic and adrenergic neurotransmission, and stimulating central nervous system. In this course student will gain knowledge about how the structure of a drug relates to its activity and metabolism. Students will also gain knowledge about drug designing, synthesis and analysis of different classes of medicinal agents.

Fundamentals of Pharmacology	**Credit Hours: 3+1**

The course provides knowledge of basic principles of pharmacokinetics and pharmacodynamics of medications and their therapeutic application. An in-depth discussion of concepts of importance in pharmacology is emphasized. The principles of the autonomic nervous system and drugs acting on it are discussed. Autacoids and anti-inflammatory medications (NSAIDs & Corticosteroids) are also covered. The course will be taught concurrently with Pharmaceutical and Medicinal Chemistry-I and Biochemistry-I courses to offer the maximum benefit of integrated knowledge.

Biochemistry- I	**Credit Hours: 2+1**

The course provides the Pharmacy students with the knowledge to understand the basic mechanisms of life, acid base balance, structure- function relationship and clinical correlation of different biomolecules including carbohydrate, lipids, amino acids, proteins, enzymes, hemoglobin and fibrous proteins and ultimately energy production through oxidative phosphorylation reactions in mitochondrial electron transport chain.

Microbiology- I	**Credit Hours: 2+1**

Microbiology is an exciting discipline with far-reaching impacts in human health and disease. This course focuses on the general principles of microbiology and includes the following topics: bacterial morphology, physiology, Identification, cultivation, resistance and introduction to viruses and fungi. It also discusses various issues related to Sterilization, Disinfection, Sterility testing and Microbial spoilage & preservation of pharmaceutical products. Laboratory focuses on the Fundamental microbiological techniques.

This course is therefore intended to provide basic knowledge in Microbiology and students will gain both background and experimental experience in the broad field of microbes setting foundation needed for more advanced and specialized courses.	
Pharmaceutics- I	**Credit Hours: 2+1**
This course is centered on imparting an understanding of the types and characteristics of conventional solid (powders, tablets & capsules), liquid (suspension & emulsion) and semisolids (ointment, cream, paste, gel & suppositories) pharmaceutical dosage forms in details. It encompasses, definition, types, preparation, additives, vehicles, problems encounter preparation, and factors affecting stability; storage, packaging and specific quality control tests of each. This course also provides extensive practical exposure which enables the students to acquire technical, calculation, communication & dispensing skills. In addition of developing professional attitudes such as team work & values.	
Natural Products-II (Pharmacognosy and Quality Control)	**Credit Hours: 3+0**
Natural Products II course provides the students information about the morphological and the histological characters of the fruits, barks, wood, marine plants and animals, their bioactive metabolites and their therapeutic uses. It also provides the students international guidelines for assessing the quality of natural products according to WHO and the scientific progress in the field of biosynthesis and tissue culture for the production of secondary metabolites of medicinal importance. It demonstrates a comprehensive knowledge and clear understanding of the different sources of natural drugs and the methods of their conservation and production.	
Pharmaceutical & Medicinal Chemistry- II	**Credit Hours: 3+1**
This course describes the medicinal chemistry of drugs affecting cardiovascular system (cardiac glycosides, antiagnial, antiarrythmic and antilipidemic agents, anticoagulants, antiplatelets, and diuretics). This course also describes opioid analgesic, antitussive, non steroidal anti-inflammatory agents and drugs affecting immune systems as antihistamines and antiulcer agents. In this course student will gain knowledge about the physicochemical/stereochemical /pharmacokinetics properties of drugs and their structure activity relationship. Students will also gain knowledge and skills about drug designing, synthesis and analysis of different classes of medicinal agents.	
Biochemistry- II	**Credit Hours: 2+1**
The course provides to the pharmacy students the knowledge and advance understanding of the basic metabolic pathways of different biomolecules and related clinical correlations in addition to integration of metabolic reactions in different human tissues and different physiological and pathological conditions.	

Microbiology- II	**Credit Hours: 2+1**
The aim of this course is to provide the students' knowledge of the morphology, cultural characteristics, antigenic structure, pathogenesis, diagnostic lab tests (conventional and molecular), epidemiology, prevention and treatment of some important pathogenic bacteria and viruses and fungi. Throughout this course, attempts are made at emphasizing those pathogenic bacteria, viruses and fungi that are of actual or potential importance to humans. Also, the student will be aware of bacteriophages and the mechanism of antibiotics, drug resistance and antibiotic susceptibility testing.	
Pharmaceutics- II	**Credit Hours: 2+1**
The course is designed to extend the knowledge of the design and formulation of advanced pharmaceutical dosage forms including sterile dosage forms (parenteral, ophthalmic), oral sustained and controlled-release systems, & new drug delivery systems (The course also will focus on the application of the physicochemical properties of drugs and excipients in dosage form design, drug formulation, product stability and drug delivery systems. This course also provides extensive practical exposure which enables the students to acquire skills (technical, calculation, communication) attitudes & values such as punctuality & honesty.	
Pathology	**Credit Hours: 2+1**
The course provides the students with the basic knowledge and conceptual understanding of the pathology of various diseases. Thus the student will be familiar with the names, classification, pathogenesis and pathological changes in the various body tissues in different diseases.	
Social Behavioral & Ethical aspect in Pharmacy	**Credit Hours: 2+0**
The course focus on professional code of conduct prescribing all the ethical responsibilities expected of licensed pharmacists in the UAE. The course introduces core concepts in sociology and illustrates how the field is dynamic and relevant to the pharmacy profession, based on sound ethical values. This relationship focuses on promoting health, preventing illness, restoring health and alleviating suffering. It emphasizes the role of sociology in the development, structure, interaction, foster sensitivity to the facility with personal and societal values, collective behavior of social relationships, interpersonal and decision-making processes associated with the provision of pharmaceutical care to culturally diverse populations.	
Pharmacology & Therapeutics- I	**Credit Hours: 3+1**
The course first deals with the principles of the common cardiovascular diseases describing the causes of hypertension, the major determinants which control coronary blood flow, and the	

most likely etiology of heart failure.

Then, the course provides the clinical characteristics (mechanism of action, benefits, adverse effects, interactions, and contraindications) of beta blockers, diuretics, vasodilators, calcium channel blockers, nitrates, ACE inhibitors, ARBs, cardiac glycosides and antiarrhythmics.

Finally, the therapeutic benefits of medications, the management guidelines, treatment algorithms, and patient educations of the studied disorders are fully covered. The course will be taught concurrently with Pharmaceutical and Medicinal Chemistry-II course to offer the maximum benefit of integrated knowledge.

Phytochemistry	**Credit Hours: 3+1**

Phytochemistry course introduces the pharmacy students to the concept of the drugs derived from natural resources according to their biosynthetic origin as well to impart an understanding of natural product structures and the way they are put together in living organisms.

The student should be aware with different methods of extraction, Isolation/identification as well as with the biological activities of the plant constituents of the acetate-malonate and shikimic acid pathways and the drugs containing these constituents. Therapeutic and toxicological activities of the secondary metabolites are also discussed in this course.

Pharmaceutical Analysis	**Credit Hours: 3+1**

This course is an introduction to modern instrumental methods of chemical analysis. It describes the theory of operation, instrument design and methodology, and applications of spectroscopic techniques of UV/VIS, Fluorescence, FTIR, AAS, MS, and NMR, and chromatographic methods that includes gas and liquid chromatography. Laboratory includes practical examples of the methods covered in lecture.

Pharm. & Medicinal Chemistry- III	**Credit Hours: 3+0**

This course describes the medicinal chemistry of antibiotic and antimicrobial agents, antifungal, antiviral and antineoplastic agents. In this course student will gain knowledge about drug discovery, design, synthesis, development and how the structure of a drug relates to its physicochemical, pharmacokinetic properties and pharmacological activity.

Biopharmaceutics & Pharmacokinetics	**Credit Hours: 3+1**

The major focus in Biopharmaceutics will be concentrated on the various in vitro and in vivo factors that can affect drug performance in the body during the processes of liberation, absorption, distribution, metabolism, excretion with the purpose of evaluation of drug delivery systems, and the therapeutic management of patients. The pharmacokinetics section of the course provides a conceptual and quantitative background in pharmacokinetic theory and applications needed to pursue advanced studies in clinical pharmacokinetics.

Basic Genetics	**Credit Hours: 2+0**
This course is designed to provide the students with an understanding of basic concepts of genetics which includes the chromosomal basis of heredity, Nucleic acids (DNA and RNA), replication and repair mechanisms of DNA, genes, gene families, gene frequencies gene expression, regulation and gene mutations. Also, the students will be aware of single gene and multifactorial inheritance and the treatment of genetic diseases. This course will provide solid foundation needed to be successful in the subsequent courses within the program.	
Pharmacology & Therapeutics- II	**Credit Hours: 3+1**
The course covers the pathophysiology, clinical presentation, diagnostic tools and factors contributing to the most encountered respiratory, gastrointestinal and rheumatologic disorders. The goals of therapy, medications used, treatment algorithms, management guidelines and patient education of the studied disorders are fully covered.	
Pharmacology & Therapeutics- III	**Credit Hours: 3+1**
This course is designed to provide students with integrated knowledge of basic Pharmacology of various classes of antimicrobial and chemotherapeutic agents. Furthermore, the course covers the management of selected infectious and neoplastic diseases based on evidence-based guidelines including lower respiratory tract, urinary tract, endocarditis, gastrointestinal, CNS infections. Additionally, the course will cover antineoplastic pharmacology with various applications in neoplasm management, including breast cancer and lymphomas. The course will be taught concurrently with Pharmaceutical and Medicinal Chemistry-III and Microbiology-II courses to offer the maximum benefit of integrated knowledge.	
Pharmaceutical Technology	**Credit Hours: 3+1**
This course designed to train students in various aspects of pharmaceutical industry and to provide a proper understanding in pharmaceutical pre-formulation studies, basic industrial processes (milling, mixing, drying, filtration and granulation), products packaging and good manufacturing practices in drugs manufacturing. In addition, the course stresses upon the technology of some advanced pharmaceutical dosage forms including transdermal patches and microencapsulation.	
Pharmacy Practice	**Credit Hours: 3+1**
The aim of this course is to provide the students with the knowledge of the minor diseases that can be managed by the pharmacist concerning etiology, symptoms, diagnosis, treatment, management and counseling. Also, the student should be aware with different types of OTC medications used for medical cases of respiratory and GIT systems, skin and dental care, children health, ENT problems and pain cases. Also it supplies the student with the professional	

communication skills needed to deal with patients in the hospital and community pharmacy settings during an OTC drug therapeutic dialogue.	
Pharm. & Medicinal Chemistry- IV	**Credit Hours: 3+0**
This course describes the medicinal chemistry of centrally acting drugs that includes sedatives-hypnotics, antiepileptics, general anesthetics, psychotherapeutic drugs, antiparkinsonian and skeletal muscle relaxant. It also describes the drugs that affect neuronal transmission as local anesthetics, drugs affecting endocrine system as insulin and oral hypoglycemic drugs, steroid hormones and therapeutically related drugs (corticosteroids, sex hormones) and thyroid drugs. In this course student will gain knowledge about how the structure of a drug relates to its physicochemical properties, pharmacological activity and metabolism. Students will also gain knowledge about drug designing and synthesis of respective classes of pharmacodynamic agents.	
Immunology	**Credit Hours: 2+0**
The aim of this course is to provide the students an understanding of immune system, familiarize them the important theories of immunology and the different types of failures of immune system. Also, the students should be aware with different types of immunoglobulins and immunogens and their functions, immunohematology and immune therapy which is a rapidly evolving area that will emphasize Biotherapeutics, Immune stimulants, Immune suppressants and Monoclonal antibodies.	
Applied Pharmacokinetics	**Credit Hours: 2+0**
The course deals with the concepts of clinical pharmacokinetics of certain drugs and calculation of doses of drugs during organ impairment and transplant clinical pharmacokinetics and therapeutic drug monitoring, drug administration, alteration of dosage form and doses based on individualization and population data, approach to therapeutic drug monitoring, case study of drugs requiring therapeutic monitoring.	
Alternative & Complementary Medicine	**Credit Hours: 2+0**
Alternative and Complementary Medicines course provides the students a broad range of complementary therapies and how these can be utilized to enhance health. The students will be able to locate and evaluate credible information about complementary therapies and wellness. This course also covers the treatment of different diseases by herbal therapy, dietary health supplements, aromatherapy, relaxation therapy, minerals and vitamins supply, acupressure, ayurvedic medicine therapy, homeopathy and hydrotherapy.	
Clinical Pharmacy & Pharmaceutical Care	**Credit Hours: 3+1**
This course provides the knowledge and experience that enables the students to understand and describe clinical pharmacy and pharmaceutical care practice aspects. The aim of this course	

is to provide the students with the skills of treatment assessment, care plan developing and follow up evaluation. Also, the student will be provide with the skills of identifying different types of patients drug related needs, different types of drug related problems and taking decision with ethical considerations in the practice of clinical pharmacy.	
Pharmacology & Therapeutics- IV	**Credit Hours: 3+1**
This course is designed to provide students with broad understanding of central nervous system pharmacology in addition to the pharmacology, pathophysiology, clinical pharmacokinetic and pharmacotherapy in major areas of endocrinology with special emphasis on the diabetes mellitus, thyroid disorders and osteoporosis. The course includes practical classes using case-based approaches related to the topics of this course.	
Pharmaceutical Biotechnology	**Credit Hours: 3+0**
This course provides a balanced and comprehensive knowledge of the basic as well as applied aspects related torecombinant DNA technology, hybridoma technology and fermentation technology in pharmaceutical sciences, the use of hybridoma technology to produce monoclonal antibodies as potential antitumor agents, and the use of recombinant DNA technology to produce several drugs such as insulin, human growth hormone, hepatitis B vaccine, tissue plasminogen activator. Also, the student will be aware of characteristics of different types of Biotechnology Based Pharmaceuticals(Nucleic Acid Based Pharmaceuticals and Protein Based Pharmaceuticals) and delivery considerations, purification and stability of biotechnological drugs.	
Professional Skills in Practice	**Credit Hours: 2+2**
The aim of this course is to provide the students with the knowledge of the various health care providers, rapidly evolving types of healthcare delivery systems, and complexities of relationships among the various health care professionals working within the health care system. Students should be aware of the basic clinical skills required by pharmacists to get the insight they need to cultivate informed, compassionate and effective patient care.	
Toxicology	**Credit Hours: 2+0**
The course is intended to empower students with basic knowledge of Toxicology. The major focus of the course is on basic principles, mechanisms, and common approaches for the management of poisoned patients. Selected topics are covered in this course that includes occupational, heavy metals and drug toxicities. Students will gain knowledge of how selected chemicals/drugs exert toxic effects, present and managed clinically.	
Pharmaceutical Management	**Credit Hours: 2+0**
The aim of this course is to provide the students with the principles of management related to pharmacy practice. During this course, students are exposed to various management principles	

which enable them to efficiently manage pharmacy store.	
Pharmacy Laws & Drug Regulations	**Credit Hours: 1+0**
The course covers various policies, laws & regulations related to pharmacy practice and pharmacy professionals dealing with licensing, pharmacy operations, controlled substances, and operations in institutions. Brief overview of the legal system including nature and sources of UAE laws on practicing pharmaceutical profession and trading in a medicine profession.	
Pharmacoepidemiology & Pharmacovigilance	**Credit Hours: 2+0**
This course is equipping with a basic understanding of the concepts and practice of pharmacoepidemiology and pharmacovigilance in areas related to the assessment of drug safety and risk-benefit of drug use. This course will meet the needs of a wide variety of practitioners. This course covers the basic principles of epidemiological study designs. The process of drug development and limitation to the clinical trials are discussed in this course. The status of Pharmacovigilance System in the UAE is correspondingly discussed with the principles of pharmacovigilance. This course also introduces the students to the principles and techniques of pharmacoeconomics and health outcome evaluation.	
Pharmacogenomics	**Credit Hours: 2+0**
The goal of the course is to give students an understanding of the principles of human genetics and genomics as they apply to improving the problems in drug therapy optimization and patient care, thus providing basic understanding of discipline of pharmacogenomics. The genetic basis of variability in drug response can contribute to drug efficacy and toxicity, adverse drug reactions and drug-drug interaction. As such, pharmacists need a thorough understanding of the genetic component of patient variability to deliver effective individualized pharmaceutical care.	
Hospital Pharmacy	**Credit Hours: 2+0**
The aim of this course is to provide the students with the knowledge of the principles of pharmacy practice in a hospital setting. It aims to enable students to gain knowledge to practice in various areas of hospital pharmacy including: understanding the basic layout of the pharmacy department in a hospital setting; understanding the roles of the pharmacist in hospital practice including the distribution of medications, medication compounding, collaborations as a member of the healthcare team, and other patient care services, identifying and reporting any possible drug interactions and mastering the administrative part of hospital pharmacy services including drug distribution control system & unit Dose Systems.	
Biostatistics	**Credit Hours: 1+0**
This is an intensive introductory course in statistical methods used in applied research. The course emphases on principles of statistical reasoning, underlying assumptions, and careful	

interpretation of results. The course familiarizes the students with the use of a statistical package and give them the skills needed for effective data management, data manipulation, a data analysis at a basic level. The course will develop basic skills in the use of a statistical package through classroom demonstrations and independent lab.

Nuclear Pharmacy	**Credit Hours: 2+0**

Nuclear pharmacy is a specialty area of pharmacy practice dedicated to the compounding and dispensing of radioactive materials for use in nuclear medicine procedures. This course covers basic concepts involved with radioactivity, different types of radiations, radiation dose, nuclear medicines, and diagnostic & therapeutic applications of nuclear medicines.

Bioassay	**Credit Hours: 2+0**

The course provides basics of tests applied in screening of new substances or herbal extracts.

It also focuses on clarification of the basic concepts of biological assay of drugs based on their pharmacological classification. Experiments applied to assess many drug classes like autonomic-acting agents, anti-histaminics, anti-inflammatory, antihypertensive agents, analgesics and neuroleptics are fully discussed.

Integrated Problem Based Learning	**Credit Hours: 1+0**

The course is clinically oriented to emphasize the pharmacotherapy in patient care. The students discuss different scenarios of patient cases where medical history, symptoms, clinical presentation and laboratory values are stated. The students are directed to raise the objectives of their study in order first to assess the possible drug-related problems, second to suggest possible solutions of these problems and finally to evaluate these solutions based on clinical evidence. This course will enhance the students' oral and written communication skills, and their abilities to extract information from medical records, search, sort, critically think and analyze drug-related information.

Computer Applications & Informatics

Computer Applications

The aim of this course is to provide the students with the ability to format and document source material in properly constructed papers, presentations, and a variety of visual formats.

Informatics

Upon completion of the course the student should have the knowledge and experience that enable them to comprehend the hospital information system including Electronic medical record and drug information system in addition to using ICT (information communication technology) in the applied fields of pharmacy.

Calculations in Practice

The aim of this course is to provide clear instructions of calculations to pharmacy students with thorough revision, and enabling them to perform flawless calculations accurately which develops confidence in them. Since pharmacist use calculations regularly in their practice, it is vital that they are able to employ calculation skills precisely so as not to compromise patient safety. Therefore the students should get a mandatory pass in this course before getting graduation

Graduation Research Project	**Credit Hours: 2+0**

In the final phase of their studies, students have to present a project based on all round knowledge they have acquired in different areas of pharmaceutical sciences. The presented project is evaluated and the students are assessed for their knowledge by a panel of internal and external examiners.

Practical Courses

The practical hours mentioned for respective subjects above were designed based on topics taught for each subject in theoretical hours. Being an applied and professional course thorough practical work is undertaken to put the theoretical teaching into practice.

Professional Practice Experience (PPE)	**Credit Hours: 14**

PPE001:

Introductory Professional Practice Experience in Community for 200 hours during summer vacations in second and third year of B. Pharm.

PPE002:

Professional Practice Experience in Pharmaceutical Industry for 100 hours during fourth year of B. Pharm.

PPE003:

Professional Practice Experience in Hospitals for 600 hours during fourth year of B. Pharm.

8. Academic Offences

Students must share the responsibility for creating and maintaining an atmosphere of honesty and integrity. Students should be aware that personally completing assigned work is essential to learning. Students who are aware that others in a course are cheating or otherwise committing academic dishonesty have a responsibility to bring the matter to the attention of the faculty.

Academic dishonesty include,

- **Plagiarism:** *The adoption or reproduction of ideas or words or statements of another person without due acknowledgment*.
- **Fabrication:** *The falsification of data, information, or citations in any formal academic exercise*.
- **Deception:** *Providing false information to an instructor concerning a formal academic exercise—e.g., giving a false excuse for missing a deadline or falsely claiming to have submitted work*.
- **Cheating:** *Any attempt to give or obtain assistance in a formal academic exercise (like an examination) without due acknowledgment*.
- **Sabotage:** *Acting to prevent others from completing their work. This includes cutting pages out of library books or willfully disrupting the experiments of others.*

Academic Misconduct include,

a) The actual or attempted tampering or misuse of academic records or materials such as transcripts and examinations.

b) *Stealing, buying, or otherwise obtaining all or part of an unadministered test or academic exercise;*

c) *Selling or giving away or engaging in bribery to get all or part of an unadministered academic exercise or any information about it;*

d) *Changing or altering a grade book, test, or other official academic records of the College*;

e) *Entering an office without authorization for the purpose of changing a grade or tampering in any way with grades or examinations*.

Instances of academic dishonesty and misconduct will be reported to the Dean. The Dean will form a Disciplinary Committee comprising of senior faculty members of the College who will investigate the type of academic honesty and misconduct committed by the student. Depending upon the level of each mentioned above the penalty will be imposed by the Disciplinary committee which is subjected to Dean's approval. The decision of the Dean will be final. The report of academic dishonesty or misconduct will be filled in the student's advisory file.

Penalties that can be imposed by the Disciplinary committee include:

In the case of taught modules:

- Setting aside the component or assignment concerned and requiring you to complete it as if for the first time
- Failure of the component. You will be reassessed and the mark capped if appropriate and not disproportionate in effect

- Failure of the component and the module. You will be reassessed in the module.
- Expulsion, to incorporate failure of any and all assessments or examinations taken during that session.
- Failure of that academic year (or specified part thereof) and the student to retake its assessments, with or without attendance.
- No marks to be awarded in relation to the specific material which is the subject of the academic offence (thus leading to a reduced overall mark for the piece of course work, dissertation, examination question or examination script in which the specific material appears).
- A mark of zero for the entire piece of course work, dissertation, examination question or examination script in which the academic offence has occurred.
- A mark of zero for the entire course in which the academic offence has occurred.
- Award a mark of zero for all the assessments in the semester.
- award a mark of zero for the whole year
- require the student to take reassessments (as a result of being awarded zero marks) in the following session before being allowed to progress or complete their course
- require the student to enroll on courses in which they need to take reassessments (as a result of being awarded zero marks) in the following session before being allowed to progress or complete their course

In case of research work:

- Require a research student to resubmit a dissertation.
- Require a research student to register for a period of supervision before being allowed to resubmit a dissertation.
- Withdraw the award of a degree or other qualification from, and issue an amended transcript.

9.Examination , Grading & Assessment

Course Assessment

Each course is assessed as outlined in the course description form and can be further discussed with the course coordinator.

The College will follow mainly two basic measures to assess student's learning such as formative and summative which includes,

- Assignments.
- Seminars
- Problem Based Learning (PBL).
- Theory ,Oral and Practical examinations
- Preceptors' grading and assessment.
- External reviewers' reports.

Examination Schedule:

The students shall take their exams as per the schedule fixed by the College in the light of the following rules and regulations: The students shall take their exams as per the schedule fixed by the College in the

light of the following rules and regulations. Final exams will be held at the end of the semesters (Fall and Spring), on completion of the prescribed syllabus.

Re-sit Exams:

- Re-sit exams for all the subjects considered necessary shall be held at the end of second semester within a week after the declaration of the examination results.
- Not more than one re-sit exam for any subject shall be allowed within one academic year.

Course Grading System:

Students are assigned grades (letters) for each course in which they have enrolled. The letter reflects the student's achievement in the course. The minimum grade for passing a course is letter (D) and grades are written in letters according to the following table:

Range of Marks	Grade Point	For BPharm	
		Evaluation	Grade Symbol
95- 100	4	Outstanding	A+
90 – 94.99	3.75	Excellent	A
85 – 89.99	3.50	Very Good	B+
80 – 84.99	3.00	Good	B
75 – 79.99	2.50	Satisfactory	C+
70 – 74.99	2.00	Pass	C
65 – 69.99	1.5	Unsatisfactory	D+
60 – 64.99	1.0	Unsatisfactory	D
Below 65	Failed	Failed	F
Administrative Codes			
Incomplete		I	
Withdraw		W	

Computation of the Cumulative Grade Point Average (CGPA) and Grade Point Average (GPA)

- The GPA is calculated by multiplying the grade of each course by the number of its credit hours and dividing the total by the number of total credit hours taken in a semester.
- The CGPA is calculated by multiplying the grade of each course by the number of it's credit hours and dividing the total of all courses by the number of total credit hours taken for all semesters.
- By contrast, the GPA is the average of grade points of all courses in one semester, whether she passed or failed the course.
- As mentioned earlier, the CGPA is the average of grade points of all courses in all semesters.
- Both GPA and CGPA are rounded to the nearest decimal units. GPA and CGPA are calculated according to the following formula

GPA =	Total (credit hours per course x grades received per course) for all courses taken in one semester
	Total credit hours for all courses taken in one semester
CGPA =	Total (credit hours per course x grades received per course) for all the courses taken in all semesters
	Total credit hours for all the courses taken in all semesters

GPA / CGPA	B. Pharm
	Evaluation
3.75 - 4.00	Outstanding
3.74 - 3.60	Excellent
3.00 - 3.59	Very Good
2.50 - 2.99	Good
2.00 - 2.49	Satisfactory
Less than 2.00	Unsatisfactory

Incomplete Grades

1. A student who is unable to attend the final exam of any course because of extenuating circumstances such as serious illness, accident or death of a family member during the final examination period seeks an incomplete grade "I" for the course.
2. Grade "I" is granted to the student if the average marks of the course work is not less than 60%.
3. Requests for an "I" grade is made on a form available from Dean's office
4. Unless otherwise stated on the form, the work required to remove an "I" grade is to be completed no later than the end of the second week of the next semester in which the student registers at the university, otherwise a grade of "F" is recorded.
5. (For Credit System students only) after the two week add/drop period, and up to the end of the 10th week of a semester, students may choose to withdraw from a course without academic penalty; however, a grade of "W" will appear on the student's transcript.

9.1. Seminar Rubrics

Student Presenter: _____ **Grading Scale:**

Evaluator: _____ Date:_____

F	D+	C	C+	B	B+	A	A+	

Knowledge & content	1 (below 40)	2 (40-60)	3 (60-80)	4 (80-100)	Score
Organization and Presentation	Hard to follow; sequence of information jumpy	Most of information presented in sequence	Information presented in logical sequence; easy to follow	Information presented as interesting story in logical, easy to follow sequence	
Background content	Material not clearly related to topic OR background dominated seminar	Material sufficient for clear understanding but not clearly presented	Material sufficient for clear understanding AND effectively presented	Material sufficient for clear understanding AND exceptionally presented	
Contribution of work	Significance not mentioned or just hinted	Significance mentioned	Significance explained	Significance exceptionally well explained	
Knowledge of subject	Does not have grasp of information; answered only rudimentary questions	At ease with information; answered most questions	At ease; answered all questions but failed to elaborate	Demonstrated full knowledge; answered all questions with elaboration	
Presentation Skills					
Graphics (use of PowerPoint)	Uses graphics that rarely support text and presentation	Uses graphics that relate to text and presentation	Uses graphics that explain text and presentation	Uses graphics that explain and reinforce text and presentation	
Mechanics	Presentation has more than 10 misspellings and/or grammatical errors	Presentation has no more than 5 misspellings and/or grammatical errors	Presentation has no more than 2 misspellings and/or grammatical errors	Presentation has no misspellings or grammatical errors	
Eye Contact	Reads most slides; no or just occasional eye Contact	Refers to slides to make points; occasional eye contact	Refers to slides to make points; eye contact majority of time	Refers to slides to make points; engaged with audience	
Elocution - not ability to speak English language	Mumbles and/or Incorrectly pronounces some terms	Incorrectly pronounces some terms	Incorrectly pronounces few terms	Correct, precise pronunciation of all terms	
Intonation	Voice is low; difficult to hear	Voice fluctuates from low to clear; difficult to hear at times	Voice is clear with few fluctuations; audience can hear well most of the time	Voice is clear and steady; audience can hear well at all times	
Length and Pace	Short; less than 30 min	Short 40 min OR long >50	Adequate 40-45 min	Appropriate (45-50 min)	
	Rushed or draggingthroughout	Rushed or dragging in parts	Seminar mostly well-paced	Well-paced throughout	

10. Methods for Instruction

1. Integrative Methods

Lecture — An oral presentation, usually formal in nature, to a group by an individual highly knowledgeable about the subject.

Brainstorming — A process in which students are encouraged to participate by sharing their ideas or suggestions on a subject. No discussion of each point is allowed until important ideas have been expressed.

Group Discussion - A small group comprising of not more than 10 students with each faculty memberto discuss on subject related topics.

Office Visit — A face-to-face exchange of information among two or more students, usually at the location of the information provider.

2. Reinforcement Methods

Problem-based learning (PBL) is a student-centered instructional strategy in which students collaboratively solve problems and reflect on their experiences. Student-focused problem- based learning is a self-directed process characterized by active acquisition of knowledge and problem-solving skills by students, that occurs from the process of reasoning towards the understanding or resolution of problems. It results in a usable knowledge data base that has been actively acquired and is reinforced through repeated applications. Students are motivated by the internalized reward of discovery and develop a colleague based learning that will produce pharmacists who have learned to learn and have the ability to apply their knowledge base to the resolution of new and unique problems.

Computer software- A set of instructions or program, that enables a computer to be used to provide educational information, to transmit communication or to aid in decision making.

Self-Learning- Since self-directed learning is believed to promote lifelong learning so students are motivated to take up self-learning exercises and are also encouraged to make presentations on allotted topics during the regular lecture schedules.

Symposium — An assembly in which short presentations are made by a small number of speakers who are knowledgeable about a particular subject. These presentations may range from 20 to 30 minutes each.

Group Discussion - A small group comprising of not more than 10 students with each faculty member to discuss on subject related topics.

Panel Discussion— A gathering at which a panel of individuals discuss a subject in front of students but interact with student members only when those members wish to ask a specific question or clarify a point under discussion. When a particular point is resolved, the organized discussion among panel members continues.

News Letters — A publication of six pages or fewer, focusing on broader topic related to the subject that presents instructions, guidelines, or other specific information.

Scientific Poster — A large, printed sheet intended for display and containing words, illustrations, or both to provide general or specific information for broad or targeted students.

Leaflet or flier — Brief, concise printed information focused on a specific program, objective, current event, or other activity and designed to create or enhance awareness.

Pamphlet or booklet — A printed publication that provides more comprehensive information on a subject than a fact sheet, leaflet, or flier.

Journal article — A means of presenting scientific, theoretical, or philosophical information in a professional journal or in a periodical that focuses on a specific discipline, commodity, student, or subject matter.

3. Practical Methods

Method demonstration — An explanation of how to implement a practice or accomplish a task by showing a practical application or guiding the learner in carrying out the task.

Result demonstration — A presentation that shows the effects of a practice change or task by means of practical application, using visual, experiential, or oral methods; it usually involves a before-and-after comparison.

Field trip — A planned activity of one-day duration in an outdoor setting for demonstrations; observation of programs, practices, activities, or objects; presentations; or practical experiences.

Workshop — A meeting in which a small group of people with common interests meet to study or research a specific topic or to practice a specific skill to enhance their individual knowledge and proficiency.

Role play — An exercise in which selected members of a group are assigned to play specific roles in a hypothetical or simulated situation followed by discussion among all group members.

Case study — A specific and detailed description of an event, situation, or circumstance that is presented to a student for study and analysis.

Practical Exercise:

Statistical Analysis of Data or results — Evaluation, use, or presentation of new or existing data to explain or predict the impact of a practice, innovation, input change, or changing conditions and circumstances.

Professional Practice Experience-(PPE)

Professional Practice Experience (PPE) is the experience gained during the training period in community pharmacies, hospitals and pharmaceutical industries.

PPE001: Introductory Professional Practice Experience in Community for 200 hours during summer vacations in second and third year of B. Pharm.
PPE002: Professional Practice in Pharmaceutical Industry for 100hours during fourth year of B. Pharm.
PPE003: Professional Practice Experience in Hospitals for 600 hours during fourth year of B. Pharm.

4. Co-Curricular Activities

Facilities for Teaching

Dubai Pharmacy College has excellent teaching facilities for students. It has four lecture rooms which are equipped with a video projector, computerized digital whiteboard, smart-board a Lap-top, on-line computer and audiovisual facilities. For quizzes and assessment of student learning *clickers* are used in classrooms. All the courses taught have complete notes and details on intranet of the College. The students have access to it so that they can point out the teacher at any time. Besides these the College also provides handouts or notes for all courses to be taught in B. Pharm. before the beginning of the next semester so that the students when they join the College should come well prepared in advance.

11. Progress Policy Guidelines

Satisfactory Progress
A student must maintain a semester GPA of 2.00 to be considered making satisfactory progress.

Probation
Students who fail to achieve a semester GPA of 2.00 shall be placed on probation for one semester. If the student achieves a semester GPA of 2.00 or better during the probationary semester she makes satisfactory progress but has not achieved the required semester GPA of 2.00, the student may continue on probation for one additional semester and will be allowed to appear in the supplementary exams held in September each year for both semesters.

Unsatisfactory Progress
If the student on probation fails to achieve a semester GPA of 2.00 at the end of the first probationary semester, the student will be reported to the Dean as making unsatisfactory progress. The student will be permitted to remain on probation for one additional semester.
A student who fails to achieve a semester GPA of 2.00 at the end of the second consecutive probationary semester shall be reported by the Examination and Evaluation Unit to the Dean's Office as making unsatisfactory progress.

Note: If a student fails to obtain the GPA 2.0 (70%) then she should repeat the course(s) in which unsatisfactory grades (D/D+) are got. In case, failing to improve the grades even after repeating the course(s) those students will be dismissed from the College.

12. Policy for Completion of Undergraduation

A student will be awarded Bachelor of Pharmacy (BPharm) degree subject to fulfilling the following requirements:

- **Completion of all courses and Professional Practice Experience as specified in the study plan**
  Students enrolled in this program are exposed to a core professional curriculum that includes the basic sciences, basic biomedical sciences; pharmaceutical sciences; social, behavioural and administrative pharmacy sciences; and clinical sciences in addition to general education and elective courses.

- **Maintain a CGPA of at least 2.0 on a 4.0 scale.**

- **Minimum and maximum periods of enrolment for the completion**
  The minimum duration required for completion of the BPharm program is 4 years and the maximum period should not exceed 6 years.

13.Student Rights & Responsibilities

Statement of Student Rights and Responsibilities

Every student who enrolls at DPC has a right to a student-centered education, research and services. Students should positively contribute to the safe learning environment by maintaining high standards of integrity and academic honesty at the same time familiarizing themselves with and adhere to all policies and regulations of the College.

Student Rights

For a registered student in Dubai Pharmacy College the rights are:

1. Obtain pharmacy education according to a well-established educational program and in a suitable educational environment.
2. Attend theory and practical classes regularly and to participate in scientific discussions held in the class as directed by the faculty.
3. Participate in all students activities sponsored by Student Union.
4. Benefit from facilities offered by the College such as library, hostel, transportation and others.
5. Get the identity card issued annually from the College after payment of its fees in order to prove that she is a student in the College.
6. Appear in all examinations and evaluations conducted according to the regulations of the College.
7. Get health care facility in case of emergency and first aid only. The College will not be responsible for expenses of treatment in any case and only transportation can be provided to and from medical clinics in Dubai.
8. Get social care services offered by the College.
9. Have a residence visa sponsored by the College for hostel students as per the rules. The student will bear all expenses for her residence visa.
10. Get the following certificates from the College:
    a. An annual certificate to prove that she is studying in the College

b. A certificate to prove her academic level which she obtained as per the College records
c. A certificate for the expenses required for her College study
d. A certificate for her good behavior and discipline in the College
e. A graduation certificate after she fulfills all the requirements needed for graduation as per College rules
f. A release certificate from the College

Note: All the certificates mentioned above in (10 a to f) should be issued as per the College rules and also according to the requirements of the student. The first copy of all certificates issued will be free of charge. If the student needs another copy then it will be given by charging a nominal fee fixed by the College. But photocopies (like the original) of certificates will be given free of charge.

Student's Responsibilities

The duties of the students are:

1. Do her best to achieve the goals set by the College as mentioned in the regulations of the College.
2. Do her best to achieve high level of scientific and educational standard. To achieve the desired level, she should not hesitate in taking help from the administration, the Dean and staff members of the College so that there is no hindrance in her way.
3. Follow all the rules and regulations of the College for academic and scientific activities.
4. Participate positively in evaluating the College development and performance by giving advice and written suggestions to the College administration in the questionnaire annually or by other means.
5. Handle all the properties of the College like instruments, equipment etc., carefully.
6. Be cooperative in adopting all the College principles especially the following:
   (a) To wear Islamic *Hijab*
   (b) To be punctual in offering prayers
   (c) To maintain good relationship with her colleagues
7. Inform the College administration or the Dean about misbehavior or any mistakes committed by any student, which may give bad reputation to the College.
8. Pay the fees regularly as required by the College.
9. It is mandatory for all the students to follow the rules relating to attendance and any non-compliance will lead to consequences mentioned in the attendance policy mentioned in Student Handbook.

14. Student Appeals Policy

Every student has right to put across her appeal within fifteen days. The appeal is addressed to the Dean. If it is not resolved properly then the student can appeal to higher authorities of the College Administration. The decision given by them will then be considered as the final decision. Appeals are limited to requests to continue in the BPharm program after being dropped from the program for academic reasons and dissatisfied course grades.

15. Students Grievance Policy

Informal Resolution:

Any student in DPC who believes that she has been treated inequitably is encouraged to resolve the matter informally. The student should first talk with the person or group at whom the grievance is directed in an attempt to resolve the issue informally.

Grievance Procedure:

The grievance procedure is described below.

1. To initiate the formal grievance procedure, the student must submit her grievance, in writing, to the Dean of DPC.
2. The written grievance shall include:
   a. a statement that the student wishes a review of the situation by a Grievance Committee.
   b. the identification of the person or group at whom the grievance is directed;
   c. the specifics of the perceived inequitable treatment;
   d. evidence in support of the student's belief that she has been treated inequitably.
3. A grievance must be initiated no later than 15 calendar days from the time the student knew or could reasonably have been expected to have known of the circumstances giving rise to the grievance.
4. After receiving the grievance the Dean will study the case with the Disciplinary Committee of the College.
5. After inquiry, the report shall be notified to the Student about the action on the grievance and the grounds for the action taken.
6. If the grievance is not resolved properly then the student can appeal to higher authorities of the College Administration. The decision given by them will then be considered as the final decision.

16.Education Support Facilities

Dubai Pharmacy College (DPC) provides all educational support facilities to its students. The students get the best scientific training and knowledge which will make them eligible as pharmacists to boost the vast scientific and industrial development of U.A.E.

COLLEGE BUILDING

The College building, on the ground floor has five laboratories, a model pharmacy with a drug information center, administrative and faculty offices, a meeting room and a reception section. On the first floor, are housed three laboratories, four lecture rooms, student’s union office, students' common room, and chemical and glassware store. The animal house is located in a building adjacent to the College. Besides the above facilities, the College is supported by a Machine Room (Industrial unit) situated in the Lootah's Educational Campus for conducting training and practicals in Pharmaceutics-I & II and Pharmaceutical technology courses.

LABORATORY AND INSTRUMENTATION FACILITIES

DPC possesses well-equipped laboratories for each discipline. There are eight laboratories in the College premises equipped with scientific apparatus and equipment required for practical and scientific investigations. Some laboratories are in Dubai Medical College and are common to both the Colleges. The laboratories are:

- **Pharmaceutics Lab**
- **Pharmacology and Natural products Lab**
- **Research Lab**
- **Instrumental Analysis Laboratory**
- **Organic Chemistry Lab**
- **Pharmaceutical Chemistry Laboratory**
- **Model Pharmacy : Pharmacotherapeutics Lab**
- **Anatomy & Histology Laboratory**
- **Biochemistry Laboratory**
- **Microbiology Lab**
- **Physiology Lab**
- **Pathology Lab**

AUDITORIUM

A well-furnished auditorium, located in DMCG, is spacious and suitable for any cultural occasion. It has become a regular venue for all social and cultural activities of DPC.

STUDY ROOMS

DPC provides study room facilities for its students, which may be utilized by them in their break hours and also by hostel students after the class hours. These study rooms are located in DMCG and are well furnished with all required facilities. The students have an easy access to these study rooms and are free to use all facilities present there like computers with Internet and Journals.

CENTRAL LIBRARY

The Central Library, housed in DMCG adjacent to DPC offers an excellent environment for study. It is available to students at various stages of study. The library working hours are arranged as far as possible to meet students' need. The library has subscribed e -Journals in various areas of Pharmacy and Medical Sciences. The physical facilities in the library are adequate space is given for housing the collection of books, journals, and audiovisuals. There is also a large reading room to facilitate learning. Students have access to computer terminals to search on-line catalogs, databases, and other information systems. The library is also equipped with photocopying machines.

Opening hours:

Sunday - Thursday	7.30am – 3.00pm
Saturday	10.00am – 2.00pm

COMPUTER LABORATORY

The Computer Laboratory is helpful in teaching of English language, computer science, pharmacy practice, pharmaceutical care and clinical pharmacy courses. The Computer Laboratory, well equipped with thirty three computers, have Internet connections along with thirty three auditory systems. Besides this Computer Laboratory, the College enjoys full technical guidance, support and know- how from the

Information Technology (IT) department, which is its sister organization and is adjacent to DPC campus.

The mission of the I.T. department is to provide computer support, awareness and training services throughout the year to faculty, administrative staff and students. It also has a laboratory which is well equipped and is freely available for use. It is monitored by well qualified staff to render help and assistance.

Learning Management System

The Learning Management System (LMS) is a tool that DPC uses to manage learning materials, assessments, grades and activities on the part of the instructor; and provides a learning environment and content delivery system to students. An LMS is meant to facilitate "anytime, anywhere" learning.

ACCOMMODATION FACILITIES

DPC provides hostel facility for students who apply for it. It is close to the College and has well-furnished bedrooms, dining room, study room and all the required facilities. Besides these facilities, internet connection is available in each room to aid them in preparing their notes and seminars. On each floor of the hostel there is a provision for praying and a gymnasium club. Students can obtain advice on accommodation from the hostel Supervisor.

HEALTH CARE FACILITIES

The College arranges to provide health care facilities to students living in the hostels. DPC has a contract for health care with its sister organization Dubai Medical Centre (DMC). DMC doctors do periodical checkup for all the students. Those found ill are taken care of by them. In severe cases the hostel authorities send the resident students to Dubai Government hospitals.

STUDENT COUNSELING SERVICES

Students who experience personal, emotional and social difficulties and may need counseling or support. DPC provides students with counseling services through a trained student counselor who helps them to cope up with a wide variety of student matters.

TRANSPORTATION FACILITIES

DPC has special minibuses for transporting students from Sharjah, Ajman, Dubai and hostel. These buses are fully air-conditioned and quite comfortable. They are used for field trips and educational tours too.

MOSQUES

The College has mosques inside its campus for faculty, staff and female students which sustains the Islamic atmosphere in the College.

DINING SERVICES

Cafeteria adjoining the College is spacious and hygienic. It offers food and beverages of students' choice. Thus it's a rendezvous for students to relax and enjoy during breaks.

RECREATIONAL FACILITIES

In the campus there is a swimming pool, basketball court and gymnasium club. These facilities help the students in maintaining proper physical fitness.

BOOKSHOP

There is a bookshop in the College which sells textbooks at subsidized rates of various subjects taught in the College. The bookshop also provides services on photocopying at a minimal charge.

17. Students' Support Services

STUDENT UNION

There is a "Students' Union" consisting of members from student community elected from all years of BPharm. The elections are held regularly at the beginning of each academic year.

The Student Union serves as the principal student programming organization at DPC. It is responsible for providing a balanced program of social, religious, recreational and cultural activities for the College, aiming to make free time activity a cooperative facet with study. The Student Union also helps to maintain close links between the College administration, faculty, and the students which are essential for efficient functioning of the College.

ACADEMIC ADVISING AND MENTORING

Students are allotted a faculty member for academic advising / mentoring. The Faculty-Advisor who is assigned to a study-group of students; guides in matters pertaining to their study plan, student development, the curriculum and other academic affairs. The advisor helps the student to organize her study plan and supervises its implementation and assists her in overcoming any difficulties related to it.

Faculty-Advisor identifies students making unsatisfactory progress in each class and remedial classes are arranged to improve their GPA. He/She also advises the student about the introduction of credit hour system and its requirements for graduation to obtain Degree in Pharmacy.

Faculty Advisors will maintain a student record based on student's dress code, attendance in classes, academic performance (GPA/ CGPA) and conduct in College.

They also provide information about programs, services, facilities and involvement opportunities that support academic success and lifelong learning, which facilitate responsible life choices, and promote awareness of self and community. It has specific mission but one common goal: to provide academic advising, outreach and support.

STUDENTS COUNSELING SERVICES

DPC provides students with counseling services through a trained student counselor. She provides personal counseling to the students concerning their personal, social and moral problems, which may cause hindrance in the way to the students' success. The personal counseling to students is provided by prior appointment with the Counselor during the College working hours.

Periodically, group counseling sessions are also arranged in each academic year. The announcement of such sessions, giving the time, date and venue, is made via the college bulletin boards. Make it a habit to attend these counseling sessions on the due dates.

STUDENTS CAREER PLANNING SERVICES

DPC provides career counseling to its students regarding career information and planning, career development, testing and prospective job placement. DPC also provides assistance to develop different skills necessary to start a career in various Pharmaceutical settings.

Career Guidance sessions at DPC are provided to the 4th year BPharm students on individual and/group basis with prior appointment with one of the personnel; Dean, Head of Alumni Affairs / Head of Professional Practice Experience Unit. They guide the students about the availability of the opportunities to help them decide on their future plans. They will serve to ensure the:

1. Preparation for MOH exams.
2. Self-improvement program for career development.
3. Availability of Jobs in different fields of Pharmacy practice.
4. Counseling for postgraduate and further studies.

18. Glossary of Terms

Unit System
DPC uses the course unit system which is based on the required number of hours of instruction to be successfully completed according to the standards set by the College to obtain University degree i.e. Bachelor of Pharmacy.

Credit Hour
Credit hour refers to one lecture hour per week lasting for minimum 18 weeks.
Each lecture hour is equivalent to two hours of practical study per week.

Course
Each course is a program of study presented in lectures and practical with a fixed number of credit hours taught in one semester mentioned in the curriculum.

Curriculum
Curriculum is a total description for the BPharm. program and explains three things:

- Detailed syllabus of integrated courses that fulfill the requirements for BPharm. Degree.
- Professional Practice Experience as required for BPharm. degree.

Pre-requisite
It refers to each course which is found necessary for each student to complete successfully before being allowed to register in a subsequent one e.g. Organic Chemistry I is made a pre-requisite for Organic Chemistry-II.

Study load
Study load in DPC means the number of credit hours a student is registered for and has to attend weekly classes. In DPC in spite of introducing credit hours system the load is according to the time table fixed for each class. The only provision given to the student will be the minimum credit hours out of the total that they have to successfully complete each semester in order to be promoted to the next semester.

Course Types

a. An **elective** is a course chosen by a student listed from different areas available during the study period.
b. A **general education** is a course offering within the following areas such as Islamic studies, English, Mathematics, etc.
c. A **core requirement** course is a course within a major, which is essential and must be satisfactorily completed to fulfill the requirements of the specific departments.
d. **Professional Practice Experience** provides opportunity for a student to have workplace experiences in community, industry and hospital pharmacies and must be satisfactorily completed to fulfill the requirements of the program.

Appendix A
Professional Practice Experience

Professional Practice Experience

Introduction

Professional Practice Experience, being an integral part of DPC education program, has been given more emphasis to improve its implementation in the present curriculum and the number of hours have been rescheduled to 900 to be distributed as follows:

1. Professional Practice Experience in **Community Pharmacy** for not less than **200 hrs.** (PPE 001)
2. Professional Practice Experience in **Pharmaceutical Industry** for not less than**100 hrs** (PPE 002)
3. Professional Practice Experience in **Hospitals** for not less than **600 hrs**.(PPE 003)

Professional Practice Experience Test (PPET)

After the completion of PPE, students will be evaluated with structured evaluation checklists for PPE 001 and PPE 003, and written test (MCQ) for PPE 002 in coordination with the training staffs. It will be useful to assess their knowledge and training outcomes taking into consideration the accomplishment of output of the training goals.

Evaluation of PPE

At the end of each of PPE001, PPE002 & PPE003 the students must answer a questionnaire. College Supervisor will collect these questionnaires and co-ordinate the results. The results of this study will be discussed in the College Academic Council Meeting and the Advisory Committee for any improvements in Professional Practice in Community, Hospitals and Pharmaceutical Industry, if considered necessary.

Logbooks

- Each student will be provided with a Logbook at the start of each PPE.
- The main objective of the Logbook is to achieve the goals of PPE.
- Logbook is a manual designed by Dubai Pharmacy College, which is to be filled by the student during Professional Practice.
- Every Student should have her own “Log Book” to write down daily activities, during the PPE.
- College Supervisor will provide the student with the procedure for filling the Logbook.
- The student should submit the Logbook to the College supervisor at the end of her Professional Practice.

Student’s Responsibility:

The student must be informed before each PPE about her responsibilities which are as follows:

1. She must exhibit a professional appearance in manner and dress and adhere at all times to the standards of dress behavior.
2. She must wear her name badge at all time during PPE.
3. She must regard all information and activities relating to the pharmacy, the medical community and customers to be confidential and, under no circumstances will such knowledge be revealed to anyone.

4. She must keep in mind that the primary aim of PPE is learning. Learning is not a passive process, but requires a continuous, active commitment.
5. She should recognize that the best learning environment is one that fosters mutual respect and courtesy between the trainee and preceptor.
6. She should never question the advice or directions of the preceptor in public, personnel, but rather accept it as a means of learning.
7. She should never be hesitant to admit that something is not known to her and should seek help whenever needed.
8. She should be aware of all laws and rules which govern her practice, and should seek clarification of any points which are not clear.
9. If she is regularly asked to violate laws or has knowledge that the pharmacy where she is employed violates such laws, she should immediately report and ask for change of PPE site or the preceptor. She shall report within five days after the end of each PPE to PPE Coordinator.

I) Professional Practice Experience in Community Pharmacy (Introductory PPE 001)

It is taken by the students in one or more Community Pharmacies selected by PPE coordinator during yearly summer vacations in the second and third years of B. Pharm. under course heading PPE001.

Introductory practice experiences are intended to introduce the student to pharmaceutical care. Service learning and shadowing are two types of experiences that accomplish this goal.

Service learning allows students to participate in service projects that meet the needs of the community, foster a sense of caring for others, and lead to student learning through communication and professionalism. Therefore, there are reciprocal benefits for both the community and pharmacy students. The development of caring relationships during service learning prepares students for establishing conventional patient caring relationships.

Shadowing, another type of introductory practice experience, involves the student in observing practitioners conducting pharmaceutical services in the community pharmacy.

Learning Objectives

At the end of Introductory Professional Practice Experience in one or more Community Pharmacies, the students MUST gain skills in:

1. Distribution of medicines in Community pharmacy.
2. Acquainted with good storage practice in Community pharmacy.
3. Purchasing of medicines, cosmetics, naturaceuticals , home test kits, monitoring devices, etc.
4. Dealing with expiry medicines.
5. Dispensing of prescription.
6. Identifying, modifying or recommending modifications in prescriptions to ensure effective, safe and economical patient care.
7. Reviewing the prescription for proper product selection, proper dose, proper frequency, proper duration, drug interaction, drug disease interaction to ensure effective, safe and economic patient care.
8. Recording prescription using files and / or computer.

9. Using IT skills for gaining professional information and literature.
10. Communication with Health professionals for effective resolution of drug related problems.
11. Communication with preceptors for reviewing cases, diseases or drugs.
12. Interacting with patients for taking patient history, selecting, recommending self therapy or OTC drugs.
13. Dispensing of controlled medicines

Supervision of PPE001

Introductory PPE is carried out under the supervision of the College supervisor (Member of Student Professional Practice Experience Unit) and a preceptor at PPE site who plays positive role model for students and who possess the following characteristics.

Preceptor's characteristics

The Preceptor or the Pharmacist should:

1. Have minimum of one year of professional experience.
2. Be involved in professional organizations.
3. Be competent in the area of practice.
4. Take personal responsibility for patient outcomes.
5. Utilize clinical and scientific knowledge in clinical care decision – making.
6. Demonstrate the ability of having latest scientific knowledge in Pharmaceutical field.
7. Demonstrate a desire and an aptitude for teaching.
8. Demonstrate the ability to assess and document student performance.
9. Practice continuous professional development and collaborate with other healthcare professionals as a member of a team.
10. Demonstrate a commitment to his/ her organization, professional society and community.

Role of Preceptor

1. To train the students as per the objectives of PPE.
2. To evaluate students for their performance during PPE in developing and demonstrating the explicit skills mentioned for each PPE.
3. To ensure the recording of all data in the log book.
4. To supply the College supervisor a certificate indicating PPE completion of the student in the pharmacy.
5. To report to the College supervisor after completion of PPE.

Steps for Introductory PPE 001

1. PPE co-ordinator asks all students to suggest at least two community pharmacies of their choice with the name and qualification of the pharmacists working in these pharmacies.
2. The coordinator collects all the students before PPE and gives them the Log Book.
3. PPE coordinator explains the objectives of PPE001 and student's responsibility during PPE and also provide information to each student about the selected preceptor.

4. Each student receives a letter signed by PPE001 coordinator and the Dean for the preceptor which has the starting date and completion date of PPE.
5. After completion of PPE001 the Coordinator receives Preceptor's reports and Evaluation sheets and send them to Evaluation and Examination Unit.

Evaluation of students receiving PPE 001
Total marks for evaluation of PPE001 are 100, which are distributed as:

S.N.	Particulars	Marks Allotted
1.	Practical Performance (*)	35
2.	Patient Communication & Counseling	5
3.	Attitude	5
4.	Attendance	5
Total		50

(*) Practical performance includes the following :-
Distribution of Medication in CP (Community Pharmacy)
Storage in CP
Purchasing Methods in CP
Dispensing of Prescriptions
Calculation and preparation of Prescriptions
Dealing with Expired Medicines in CP
Preceptor and Physician Interaction
Dealing with OTC
Dispensing of Controlled Drugs in CP

II) Professional Practice Experience in Pharmaceutical Industry (PPE 002)

It is taken by the students during the second semester of B. Pharm. 4th year in Drug manufacturing industries of U.A.E., which should meet the following requirements:

1. Should apply GMP.
2. Should have manufacturing capacity of all types of pharmaceutical products, a well-developed R & D. section, a good Quality Control department and well-arranged storage facilities.
3. Should have a licensed MOH Pharmacist in Production and Quality Control department.
4. Should be functional and operative.

Learning objectives of the Professional Practice in Pharmaceutical Industry are:

1. To gain knowledge about the design and set up of a Pharmaceutical Industry.
2. To gain experience in Good Manufacturing Practice.
3. To deal with purchase and analysis of the raw materials used in the manufacturing of different pharmaceutical products.

4. To have experience in various Production Units involved in the manufacturing of solid, liquid, semisolid, and sterile dosage forms, etc.
5. To observe the packaging and storage of manufactured pharmaceutical products.
6. To attain knowledge about quality control, quality assurance and validation of manufactured pharmaceutical products.
7. To have an experience of working in quality control laboratories having sophisticated instruments like HPLC, GC, Mass Spectrophotometer etc.
8. To observe the product and development work going on in R & D labs of the Industry.

Supervisors for Professional Practice in Pharmaceutical Industry

Professional Practice in the Pharmaceutical Industry is monitored under supervision of:

1. College Supervisor: one of the members of Students Professional Practice Experience Unit.
2. Industry Supervisor: in the drug manufacturing industry.

Responsibilities of Industrial PPE Supervisors

a. College Supervisor

1. To prepare a list of students eligible for Professional Practice.
2. To send the list of students to the Industry Supervisor.
3. To co-ordinate with the Industry Supervisor for:
4. Student's transportation from College and hostels to Industry and back.
5. Monitoring the Professional Practice program.
6. Solving any problem hindering proper Professional Practice.
7. To prepare a monthly report about Professional Practice of students for review by the College Academic Council.
8. To evaluate students PPE depending on professional reports supplied by them.

b. Industry Supervisor:

1. To receive a list of students sponsored for Professional Practice.
2. Send a list of enrolled students to the College Supervisor.
3. To prepare a Professional Practice program meeting the following requirements,
    a. To identify the Units in the Industry where Professional Practice will take place as per the prescribed schedule.
    b. To identify the person responsible for marking the attendance of students during Professional Practice.
    c. To determine the mode of Professional Practice and appoint the person responsible for monitoring the program.
    d. Fulfillment of 100 hours Professional Practice in the Industry.
    e. To give each student a copy of Professional Practice program.
4. To submit a report to the College Supervisor about the students' attendance.
5. To submit a report on students assessment to the College Supervisor at the end of Professional Practice in Pharmaceutical Industry.

Evaluation of students receiving Industrial PPE 002 Total marks for evaluation of Industrial PPE002 are 50, which are distributed as:		
S. No.	**Particulars**	**Marks Allotted**
1.	Experience of stores for raw materials and finished products	05
2.	Production for solid, semi solid, liquid and sterile dosage form.	05
3.	Quality control and Quality assurance	05
4.	Research and development	05
5.	Attendance	10
6.	Professional report supplied about student	20
	Total	**50**

III) Professional Practice in Hospitals (Advanced PPE 003)

It is taken by students in 2nd semester of B.Pharm. 4th year and under course heading PPE003. Hospital training is taken in different hospitals of Dubai Health Authority (DHA) and primary health care centers. The hospitals are selected by the PPE Coordinator and it should meet the following requirements:

a. Ministry of Health, U.A.E. or, Dubai should have approved the hospital.
b. Pharmacy in the hospital should also be approved by Ministry of Health and Department of Health.
c. The hospital pharmacy should have at least five licensed (MOH / DOHMS) pharmacists under its employment.
d. All activities related to patients, drugs and dispensing in the pharmacy must be computerized.

Learning Objectives of Advance Professional Practice Experience (PPE003)

1. Out - patient practice activities:

a. Identifying the patient.
b. Managing the patients in waiting area**.**
c. Familiarity with all functions in dispensing and labeling modules in electronic pharmacy system.
d. Evaluation of drug order for completeness, dosing, route of administration , drug-drug interaction and drug-disease interaction.
e. Resolving prescription problems.
f. Calculations required compounding, dispensing and administering medications.
g. Preparing prescriptions.
h. Checking prescriptions.

i. Provide: basic life support, patient education, drug information to patients and health care professionals in an effective and efficient manner using written and verbal communication skills.

2. In - patient practice activities:

- **a.** Familiarity with the layout of the Unit Dose Area.
- **b.** Generating Unit pick list.
- **c.** Evaluation of drug order for completeness and drug errors problems.
- **d.** Documenting of pharmaceutical interventions (medication errors, ADRs, and intervention reports).
- **e.** Identifying, filling and labeling of patient cassettes.

3. Floor Stock Supply and Inspection

- **a.** Familiarity with the treatment rooms in all the areas and stock lists.
- **b.** Describing the procedures of topping up, requesting, processing and receiving indents.
- **c.** Describing the procedures for exchanging and updating of crash cart and CPR boxes.

4. I.V admixtures / TPN services and chemotherapeutic admixtures:

- **a.** Evaluating the order for completeness and accuracy.
- **b.** Performing accurate calculations and measurements.
- **c.** Compounding and preparation of I.V admixtures/ TPN.
- **d.** Proper labeling.
- **e.** Maintaining sterile environment including cleaning procedures and aseptic technique.

5. Patient counseling which will include:

- **a.** Speaking clearly.
- **b.** Using appropriate terminology.
- **c.** Listening to patient, verifying patient understanding.
- **d.** Displaying caring attitude.
- **e.** Using printed or other patient information media appropriately.
- **f.** Providing complete and accurate information including:
    - Drug name
    - Purpose and the expected benefits the patient should watch for (i.e. clearing of a rash, decrease pain)
    - Dose frequency and route
    - Special dosing instructions
    - Duration for which the patient takes the medication
    - Frequent minor side effects
    - Adverse effect that , if the patient experiences them, warrant notification to the physician or health care provider

- When performing discharge counseling , information on refills and storage to be described

6. Patient care rounds:

Patient care rounds by health care team provides an excellent opportunity for learning and are used to assess each patient's response to therapy to assess the results of diagnostic or therapeutic procedures and to establish overall medical status and treatment plans.

Participants in work rounds at a teaching hospital generally include an attending physician, a nurse and a pharmacist.

For a pharmacy student, this is often the first direct face –to–face contact with hospitalized patients and health professionals. In this environment, students have the opportunity to review a variety of clinical patient data such as laboratory tests, blood pressure readings, intake and output values, and physical examinations for a variety of medical problems common to that particular service. Most importantly, this provides an opportunity to see the patients on daily basis and to evaluate their response to drug therapy both in terms of alleviating their medical problems and perhaps in generating adverse effects.

In addition, with so many students and other health professionals participating in rounds, this is an excellent atmosphere for the discussion of disease state, drug therapy, prognosis, and other patient care issues in a multidisciplinary setting.

Objectives:

By attending work rounds, the student should be able to:

1. Identify and gather subjective and objective data necessary to monitor medication therapy for efficacy and toxicity.
2. Establish a prospective therapeutic management plan that includes therapeutic endpoints, monitoring parameters, individualization of dosages, and patient counseling.
3. Communicate effectively with other members of the health care team on topics such as therapeutics, drug information, policies and procedures, and patient planning needs.
4. Assess patient medication teaching needs and communicate medication information to the patient, including why drug changes are made and when the patient should expect to note results from the changes.
5. Resolve questionable or unclear medication orders and explain any medication errors such as missed doses, incorrect doses, or incorrect drugs.
6. Prioritize the daily workload.
7. Develop a formal working relationship with the health care team.
8. Assess patient medication needs on discharge solving the problems such as drug and dosage discrepancies, where prescriptions should be filled, and when prescriptions are needed.

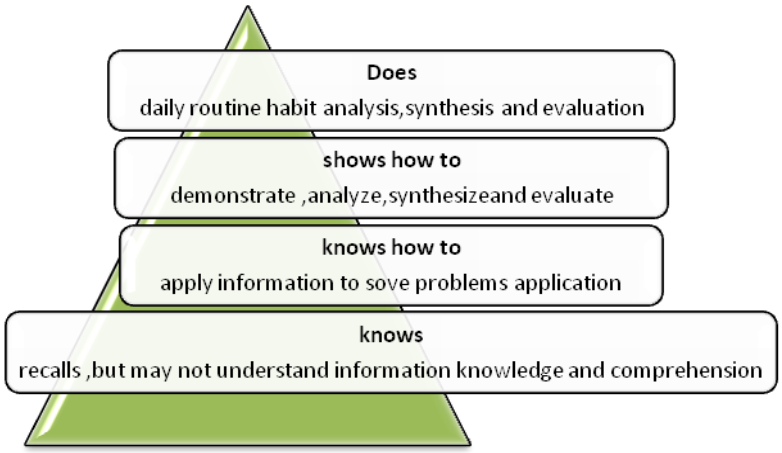
Student activities during the round:

1. Review patient medication therapy regularly before rounds in terms of indication, dosage, route, duration, efficacy and toxicity.
2. Obtain information to update and correct the medication profile.
3. Formulate and documents a list of problems for new or existing patients seen by the service. The list should focus on disease, drug, or socioeconomic factors.
4. Attend work rounds on a consistent basis and communicate to other on rounds the following information:
    a. Patient's current medication use.
    b. Observed subjective or objective signs of efficacy or toxicity.
    c. Drug distribution problems (nonformulary status or medication not ordered for a newly admitted patient)
    d. Prospective therapeutic management plans for patient problems (i.e., change of therapy, discontinuance of medication, change of pain medication, use of prophylactic antibiotics, and identification of therapeutic alternatives).
5. Attend work rounds and gather the following information:
    a. Subjective and objective data for monitoring a patient's medication therapy.
    b. Changes in patient status (condition improved or worsened), discharge date, surgery, diagnostic procedures and results of procedures.
    c. Changes in nondrug therapy (i.e., dietary changes, socioeconomic conditions, or physical therapy.
    d. Patient'sunderstanding of medication, name strength and expected benefits and toxicities.
    e. Projected discharge needs including any special counseling .
6. Communicate developments to the unit pharmacist if he or she is unable to attend all or part of rounds.
7. At the end of the day, the students and their supervisors can have a lecture regarding the cases they faced during the daily round to discuss any modification or to clarify any doubt.

Evaluation of student's performance:

During a rotation, the preceptor will assess the student's performance and provide feedback about the strengths and areas for improvement. The preceptors will make these assessments using evaluation forms and performance criteria that are based on goals and objectives out lined in the rotation syllabus or manual. Therefore, before the rotation begins, the preceptor and the student should meet and review the rotation goals and objectives, students' performance expectations and criteria to measure performance.

The rotation goals and objectives are statements that communicate the level of performance and activity of the students which are expected from them to demonstrate. Typically, rotation goals and objectives communicate that the students is expected to provide patient care successfully in the clinical setting.



This figure describes four levels of ability that a student must achieve to provide patient care. The lowest level of this triangle is "knows" this tier infers that a student can recall knowledge gained during classroom courses and the rotations. Goals and objectives describing this level will be statement such as "The student can describe symptoms, pathophysiology, laboratory tests, physical examination, prognosis and diagnosis of acute and chronic diseases. The other verbs that could be used in this statement to describe how to use the knowledge gained during class rooms

Evaluation of students receiving PPE003

Total marks for evaluation of PPE003 are 200, which are distributed as:

S. No.	Particulars	Marks Allotted
1.	Out - patient Internship	35
2.	In - patient internship.	35
3.	Floor Stock Supply and Inspection	25
4.	I.V admixtures / TPN services and chemotherapeutic admixtures.	25
5.	Patient care rounds including	25
6.	Patient counseling including	25
7.	Attitude	15
8.	Attendance	15
	Total	**200**

Overall Evaluation of PPE

S. No.	Particulars	Marks Allotted
1.	Introductory PPE001	50
2.	Industrial PPE002	50
3.	Advanced PPE003	200
	Total	**300**

Appendix B

Student Graduation Project

Introduction

The students in the fourth year of B. Pharm. submit a small thesis of the research project based on all round knowledge they have acquired in the main areas viz. Clinical Pharmacy, Pharmacy Practice, Pharmaceutics, Pharmacology, Pharmaceutical Chemistry and Natural Products. This project includes a research work, which the students carry out in a group of 3/4. Students may submit her preference to the Head of Faculty Development and Research Unit by the end of sixth semester. They have a choice of choosing bench research from subjects like phytochemistry, pharmaceutical chemistry, pharmacology, and pharmaceutics; or can do survey based on data collected from hospitals, community in subjects related to clinical pharmacy; or can write a review article.

Prerequisites: Successfully completed all the courses of first, second, third, fourth, fifth and sixth semesters.

Learning Outcomes:

On successful completion of Graduation project, students should be able to:

LO1 Investigate research problems and experiment new ideas in concurrence with the goals of the College.
LO2 Evaluate literature critically and relate research findings with reported literature
LO3 Perform various experiments and research design as a team and evaluate the appropriateness of procedures in research.
LO4 Predict conclusions from the research findings and organize/report research findings in form of project.
LO5 Defend research work to the panel of experts and present research findings at various scientific platforms.

Role of Advisor:
The student's research Advisor holds the primary responsibility for providing the appropriate guidance and counsel essential to the scholarly development of the student. Based on the research interest and mutual consent of both students and advisor, each student is allocated to specific research supervisor at the end of the sixth semester. The advisor shall supervise the student's research work and dissertation preparation and will chair the examining committee for the students' defense of their dissertation.

1) **Completion of the Graduation Project:** Completion of the Graduation project, involves a number of steps, which are as follows:

   a) **Selection and registration of topics for B. Pharm Graduation Project:** The selection and registration of topics for the BPharm Project are done accordingly as mentioned below:

      i. Collection of project topics from the faculty members.
      ii. Approving the project topics by Research and Ethical committees.

iii. Announcing the project topics by Faculty Development and Research Unit in the sixth semester.

iv. Selection and registration of projects topics by the student in groups of 3 or 4 students in each group latest by the 30th of June.

v. Research project guided by faculty supervision latest by the 10th of July.

b) Facilities, Experimental work and data collection for the Graduatione Project. The experimental work, collection of data for the project and writing of the dissertation of the project are done by the students with the help of the facilities made available by Dubai Pharmacy College. These facilities are:

- Science Laboratories of Dubai Pharmacy College.
- Science Laboratories of Dubai Medical College for Girls.
- Instrumentation facilities of Central Laboratory of the Foundation.
- Public and/or private hospitals under the Ministry of Health.
- Pharmaceutical Companies.
- Community Pharmacies.

Facilities for writing of the project: The College provides sufficient facilities to the student for efficient writing of the Research Project dissertation.

Various facilities provided by D P C are:

- Drug Information Center
- Central Library
- IT facilities

Others:

- Library of Dubai Health Authority Hospitals.

c) Organization of Graduation Project: The Graduation project should be assembled in the order listed below:

1. Title page
2. Declaration and copyright statement
3. Abstract (required; 250 words or less for the bachelors project; double-spaced and organized as statement of the problem, procedure and/or methods, results and conclusions).
4. Acknowledgments (optional)
5. Table of contents
6. List of tables (if appropriate)
7. List of figures (if appropriate)
8. Text (main body of project)- Introduction, Materials, Apparatus and Techniques, Methods, Results and Discussion, Conclusion and Recommendation(not more than 20-25 pages)
9. Appendix or appendices (if appropriate)
10. Endnotes (if compiled at the end of the text)
11. Bibliography

The design of the **cover page** of the Project dissertation should be as shown:

Margins: For copying and binding purposes, every page of dissertation must be left 1.25"; top, right and bottom 1". Margins must be left justified. All manuscript materials must fit within these margin requirements (including tables, headers and footers, figures, graphs and page numbers).

When full-page prints of photographs are desired, the image area of the print must conform to the same margins as the text.

Spacing: The dissertation, including the abstract, dedication, acknowledgements, and introduction, must be double-spaced. Footnotes, bibliographies, long quoted passages, as well as items in lists, tables, and appendices may be single-spaced. Dissertation must be printed on one side of the paper.

Pagination: The title page should be lowercase Roman numeral "i" but not typed. Subsequent pages should be typed as "ii, iii," etc., until the dissertation proper is reached. The first page of the dissertation proper is Arabic "1" and repeats the title only. Pagination appears within the one-inch margin, recommended 3/4" from the bottom edge of the paper, centered.

Style and Documentation: Style and techniques of presentation including documentation, should correspond to standard practices employed in the scholarly field of the dissertation. Generally acceptable are the documentation styles in The Chicago Manual of Style (University of Chicago Press); The MLA Handbook for Writers of Research Papers (published by the Modern Language Association of America); or

the Publication Manual of the *American Psychological Association*. Each candidate should resolve all questions of style and technique with her adviser before preparing the final copy.

All the above mentioned points are discussed with the concerned Supervisor. Rough copy is to be checked and approved from the Supervisor before the final copy is made.

2) Submission of the Graduation Research Project for Evaluation

i. Five copies of the Project dissertation are submitted to the Head of Faculty Development and Research Unit, latest by 10th June.

ii. An Evaluation Committee for the Project is formed by the Dean in consultation with the College Academic Council for the evaluation of the Project. The Evaluation Committee consists of the following:

a. A panel of external examiners
- One expert in the related field of research

b. A panel of internals examiners
- Dean or Head of the concerned Department
- Supervisors of the Graduation Project

iii. The students have to present their Project work in front of the members of the Evaluation Committee. The evaluation of the Project is done during 1st July to 10th July.

iv. The evaluation is in the form of an oral presentation by the candidate. The distribution of marks (100) is as follows:

Dissertation Writing	25 Marks
Presentation	25 Marks
Oral exam	25 Marks
Published or accepted in an indexed Journal or Conference is an added advantage.	25 Marks
Grand Total	**100 Marks**

The following evaluation tool (rubric) is used in dissertation and defense evaluation.

Dissertation & Defense Evaluation	**Does Not Meet Expectations (0-50)**	**Meet Expectations (50-70)**	**Exceeds Expectations (70-100)**
Aims	Limited expansion upon previous research Limited theoretical or applied	Builds upon previous research Reasonable theoretical or applied significance	Greatly expends previous research Exceptional theoretical or

	significance Limited publication impact	Reasonable publication impact	applied significance Exceptional publication impact
Introduction/ Literature	Little evidence of relevant and current literature. The review of the literature is fragmented and incoherent. Little or no critical appraisal of the literature.	Good evidence of literature having been reviewed. Good attempt to critique existing literature, but the link to this project could be stronger.	Excellent coverage of relevant literature from a range of sources and journals. Highly developed critique of existing literature and it is clearly linked back to the relevance of the chosen topic.
Method	Choice of method is unclear or not justified. Description of method is unclear and inadequate. Choice of data analysis is inappropriate for the study.	Method is appropriate, with good justification provided for it. Key aspects of the method are described but with some minor omissions or lack of detail. Appropriate choice of data analysis with a good justification for that choice.	Method is appropriate, with excellent justification provided. All aspects of the method are described in excellent detail. Sophisticated choice of data analysis accompanied by excellent justification for that choice.
Results	Presentation of data / results is unclear and inappropriate. Analysis of data is inappropriate or superficial. Analysis contains significant inconsistencies.	Presentation of the data /results is generally clear. Analysis of the data is appropriate but limited. Analysis contains some minor inconsistencies or inaccuracies.	Presentation of the data / results is exceptionally clear. Analysis is appropriate, thorough, and possibly innovative. Analysis contains no inaccuracies or inconsistencies.
Discussion/ Conclusions	Unsubstantiated or invalid interpretation of results. Little or no linking to theory or literature. Limitations of the research are not discussed or are incorrectly outlined. Considerations for further research are not discussed.	Good interpretation of results in relation to the study's aims. Clear references to theory and literature. Limitations of the study are addressed appropriately. Good discussion of possibilities regarding future research.	There is excellent interpretation of results in relation to the study's aims. There are excellent references to theory and literature. Limitations of the study are very well addressed. Excellent discussion of possibilities regarding future research.
Presentation/ Referencing	Formatting is frequently erroneous or inconsistent. There are frequent and major	There are some errors and inconsistencies in formatting. There are some errors regarding	Formatting is consistent, error free, and impressive.

	errors regarding language, grammar, and spelling. A non-standard or non-approved referencing system was used and/or there are major errors in referencing both in the text and within the reference list.	language, grammar, and spelling. A recommended referencing system is used but with a number of errors either in the text or in the reference list.	Language, grammar, and spelling are correct and appropriate throughout the dissertation. A recommended referencing system is used correctly and consistently throughout the dissertation.
Oral presentation and defense of dissertation	Does not adequately defend research; does not answer key questions; frequently shows a need for deeper reflection on vital points; Reads the material from presentation to make the report and is clearly not comfortable with the topic.	Adequately defends research; answers questions, but often with little insight; frequently shows a need for deeper reflection on minor points; Relies too much on presentation and has difficulty speaking freely to the audience, and is somewhat comfortable with the topic.	Masterfully defends research by providing clear and insightful answers to questions; uses presentation resources as a guide, gives detailed explanations, is easily understandable, and keeps appropriate eye contact with the audience.

Marking Scheme

Item	Score out of 100	Weighting	Percentage
Aims		**X0.05**	
Introduction/Literature		**X0.2**	
Method		**X0.1**	
Results		**X0.1**	
Discussion/Conclusions		**x0.3**	
Presentation/Referencing		**x0.05**	
Defense		**x0.2**	
Total			**100**

If one or all the examiners decided that the dissertation does not meet the requirements for the degree (failed to obtain minimum 70%), a bachelor's student will not graduate. However, the student has the option to revise and resubmit a failed dissertation within two months after which it is assessed again through the same procedure.

In cases where plagiarism in the dissertation is alleged, the dissertation examination process does not proceed any further and the case is investigated through DPCG disciplinary processes.

Placement of Alumni