



# Lebanese International University

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SCHOOL OF PHARMACY STUDENT HANDBOOK

2019 - 2020

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## 1. SCHOOL OF PHARMACY

### 1.1 Vision

The vision of the school of pharmacy is to be a socially accountable institution committed to advance the pharmacy profession through education, practice, research, and community outreach.

### 1.2 Mission

The mission of the school of pharmacy is to develop distinguished professionals in pharmacy practice, research and community services through a dynamic educational program aligned with national and international standards.

### 1.3 Core Values

- Distinction: we aim for distinction and motivation in teaching and practice.
- Diversity: we embrace a strong view that values diversity and cultural differences and recognizes the importance of global interdependence and sustainability.
- Collaboration: Collaboration: we collaborate with national and international associations and construct partnership with national and international practice sites.
- Integrity, trust, and respect: we are committed to being a school that demonstrates high level of trust and respect for all persons and cultivates individuals and institutional integrities in all aspects.
- Leadership: we promote leadership and professional development and endorse innovation and entrepreneurship.
- Dedication: we empower our students to attain the maximum intellectual potential, develop a culture of community services and commitment.

### 1.4 Goals

Our goals are:

1. Preparing professional leaders to optimize patient care.
2. Developing a distinguished professional organization qualified in education, practice and research.
3. Creating an environment that values community engagement and improves the quality of patient's life.
4. Promoting faculty, staff, students, and alumni development and growth.
5. Advancing the student's self-centered dynamic program in alignment with national and international educational standards.
6. Supporting collaborations for multidisciplinary research and affiliations with various practice settings.

## 1.5 Strategic Plan

**Theme One Teaching and Learning:** Optimize and ensure innovative teaching, learning and experiential educational pedagogies.

**Strategic Direction 1.1:** Devise a number of curriculum strategies to enable the achievement of more learner-centered and community-oriented approaches.

**Objective 1.1.1:** Maintain and improve a competency-based curriculum that is aligned with national and international standards.

**Objective 1.1.2:** Maintain the effectiveness of the school's dynamic curriculum through continuous evaluation.

**Objective 1.1.3:** Upgrade the assessment strategies that are constructively aligned with pharmacy graduate outcomes.

**Strategic Direction 1.2:** Provide distinguished, innovative, and high-quality teaching in pharmacy.

**Objective 1.2.1:** Develop and maintain processes within teaching methods that enhance students' visualization to deepen their knowledge and promote their long-term understanding.

**Objective 1.2.2:** Introduce advanced educational technology to learning sessions.

**Objective 1.2.3:** Advance the active learning approaches to improve the students' critical thinking, reflective and problem solving skills.

**Strategic Direction 1.3:** Implement a comprehensive faculty development program that aims to empower faculty members to excel as educators and create an atmosphere that values teaching and learning.

**Objective 1.3.1:** Improve the faculty professional skills through updating, maintaining and disseminating the roles and responsibilities for all faculty members.

**Objective 1.3.2:** Develop different activities that aim to heighten faculty members' leadership skills.

**Objective 1.3.3:** Facilitate faculty members' accessibility to various activities that enhance their teaching skills.

**Objective 1.3.4:** Develop and maintain institutional policies and procedures that encourage and reward teaching and continual learning.

**Strategic Direction 1.4:** Improve and maintain practice-based experiential education in order to help students to apply knowledge, develop skills, attitudes and new ways of thinking.

**Objective 1.4.1:** Expand and maintain affiliation agreements with various practice sites in which experiential education is applicable.

**Objective 1.4.2:** Establish partnerships with international practice sites through an exchange program that exposes students to foreign field experience opportunities.

**Objective 1.4.3:** Develop and maintain various activities that would embrace experiential education along with various assessment techniques.

**Objective 1.4.4:** Familiarize the preceptors with teaching and assessment techniques to maintain and improve experiential education.

**Theme Two Resources:** Provide appropriate resources for faculty and students to support the program.

**Strategic Direction 2.1:** Recruit and retain highly qualified staff members and enhance their professional development.

**Objective 2.1.1:** Actively attract and recruit an adequate number of advanced experienced faculty based on the needs of the program.

**Objective 2.1.2:** Enhance the diversity of faculty members from different tracks according to the identified needs of the program.

**Objective 2.1.3:** Recruit pool of qualified supporting staff to support the school's educational activities to meet the identified needs of the program.

**Objective 2.1.4:** Promote and train the staff members to develop personal and professional skills.

**Objective 2.1.5:** Develop favorable work environment for faculty members that ensures their morale and satisfies their collegiality.

**Strategic Direction 2.2:** Facilitate the learning process by enhancing the educational resources.

**Objective 2.2.1:** Enrich the electronic library to support the development of personal and professional skills.

**Objective 2.2.2:** Promote and ensure the proper use of technology in the academic and administrative processes.

**Strategic Direction 2.3:** Expand and enhance the quality of the school's physical facilities.

**Objective 2.3.1:** Upgrade the current offices, classrooms, laboratories, and other physical facilities to accommodate the needs of the program.

**Objective 2.3.2:** Acquire new physical facilities to support program development and research advancement.

**Strategic Direction 2.4:** Advance students' educational, career, and personal support services.

**Objective 2.4.1:** Heighten students' advising and mentoring services.

**Objective 2.4.2:** Improve student's career planning.

**Objective 2.4.3:** Provide students with opportunities for development of personal skills.

**Theme Three Research:** Support and enhance the quality and quantity of research and scholarly activities to contribute to the development of pharmacy science and practice.

**Strategic Direction 3.1:** Implement and develop an appropriate environment for research and other scholarly opportunities for faculty.

**Objective 3.1.1:** Encourage research skills and capacities and develop scholarly accomplishments.

**Objective 3.1.2:** Empower the research committee to increase engagement of faculty members to conduct research and establish ethical guidelines.

**Objective 3.1.3:** Attract funds and support publications in reputable scientific literature in terms of quality and quantity.

**Strategic Direction 3.2:** Develop student research skills through engagement in research activities.

**Objective 3.2.1:** Introduce research fundamentals at the undergraduate level.

**Objective 3.2.2:** Maintain and promote research conductance and application at the professional level.

**Objective 3.2.3:** Encourage student participation in professional meetings and conferences.

**Strategic Direction 3.3:** Provide infrastructure for collaboration in research in a multidisciplinary and innovative framework.

**Objective 3.3.1:** Secure interdepartmental collaboration within the school and the university.

**Objective 3.3.2:** Establish contact with potential research centers at national, regional and international level.

**Theme Four Engagement and Visibility:** Enhance the school's community involvement to improve health needs and expand its national and international outreach.

**Strategic Direction 4.1:** Foster a culture within the school that promotes responsibility toward community services.

**Objective 4.1.1:** Ensure widespread participation of students and faculty in public awareness.

**Objective 4.1.2:** Capitalize on the expertise of faculty and students to create positive impact in the community through international health days.

**Strategic Direction 4.2:** Achieve a local impact on pharmacy education, practice, and health care.

**Objective 4.2.1:** Increase faculty notability through their effective contribution at different national levels.

**Objective 4.2.2:** Engage faculty in offering continuous professional development.

**Strategic Direction 4.3:** Advocate within regional and international professional organizations for the advancement of pharmacy education and practice.

**Objective 4.3.1:** Initiate and participate in global professional meetings and activities.

**Objective 4.3.2:** Build a sustainable connection with international organizations.

## 1.6 Administration and Full-Time Faculty Members

Prof. Mohamad Rahal, Professor, Dean

Dr. Michelle Cherfan, Clinical Associate Professor, Beirut Campus Assistant Dean

Dr. Samar Younes, Clinical Assistant Professor, Bekaa Campus Assistant Dean

Dr. Fouad Sakr, Clinical Assistant Professor, Chairperson of PharmD Program

Dr. Dalal Hammoudi, Assistant Professor, Chairperson of Pharmaceutical Sciences Department

Dr. Jihan Safwan, Clinical Associate Professor, Chairperson of Biomedical Sciences Department

Dr. Marwan Akel, Clinical Associate Professor, Chairperson of Pharmacy Practice Department

Dr. Mariam Dabbous, Clinical Assistant Professor, Experiential Education Coordinator

Dr. Nisreen Mourad, Clinical Assistant Professor, Experiential Education Coordinator

Dr. Diana Malaeb, Clinical Associate Professor

Dr. Etwal Bouraad, Clinical Associate Professor

Dr. Fadi Hdeib, Clinical Associate Professor

Dr. Mohammad Al-Assi, Assistant Professor

## 2. ACADEMIC PROGRAM

The school of pharmacy offers the following Programs:

1. Bachelor of Pharmacy (BPharm)
2. Doctor of Pharmacy (PharmD)

### 2.1 Admission Requirements Undergraduate Program (BPharm)

Application for admission for the Bachelor of Pharmacy Program should be submitted before the mid of August of each year. Students are accepted to the school of pharmacy in the fall semester of each academic year only, based upon their Baccalaureate II, Lebanese system or its equivalency, examination results and University Placement Tests (UPTs). Furthermore, applicants to the undergraduate programs in the school of pharmacy are firstly accepted in Pre-Pharmacy years. They are also subjected to the following general conditions:

1. Have earned a recognized high school diploma, Baccalaureate II, Lebanese system, or its equivalency that is a freshman in sciences or foreign secondary school equivalent.
2. A candidate should have earned the Lebanese Baccalaureate with an overall average of at least 50% in one of the following categories:
  - a. General Science
  - b. Life Science

#### University Placement Tests (UPTs)

All candidates are required to sit for University Placement Tests (UPTs) in the following subjects:

1. English (EPT)
2. Chemistry (CHPT)
3. Biology (BPT)

However, Lebanese Baccalaureate holders who have scored 450 on the English part of SATI, 510 on the paper based TOFEL Placement Test (EPT) or 5.0 on IELTS or any corresponding international exams, will be exempted from the English Placement Test (EPT).



The scores earned by the candidate from the governmental examination and the UPT are averaged; the weights of governmental examination and UPT are fifty percent respectively. Averaged results are compared to Table 1 and the candidate is placed in each subject accordingly.

**Table 1: Placement Criteria – School of Pharmacy**

Subject	Score	Placement
English	0 – 30	ENGL051 Basic English Skills
	31-40	ENGL101 Introduction to Oral and Written Skills
	41-49	ENGL151 Advanced Writing Skills
	50 and Above	Exempted from ENGL051, ENGL101, and ENGL151
Chemistry	0-24	CHEM161 (6 Credits)
	25 - 49	CHEM160 (Freshman Chemistry II, 3 Credits)
	50 - above	Exempted from CHEM161 and CHEM160
Biology	0-39	BIOL161 (6 Credits)
	40 - 59	BIOL160 (Freshman Biology II, 3 Credits)
	60 - above	Exempted from BIOL161 and BIOL160

The passing grade of the aforementioned remedial courses is either Pass (*P*) or Non-Pass (*NP*) in which the passing grade cannot be less than 60%.

#### Selection to Professional Years

All accepted students are enrolled in pre-professional years (Pre-Pharmacy) of the Bachelor of Pharmacy program. Selection from pre-pharmacy to the first professional year (3<sup>rd</sup> year) occurs if the students meet one of the following criteria:

1. A minimum of Major Cumulative Grade of 75% (MGPA  $\geq$ 2.5) and a maximum of two GEE/GER courses remaining from Pre-Professional Years.
2. If only one major and one GEE/GER courses remaining from Pre-Professional Years with Major Cumulative Grade  $\geq$  78% (MGPA $\geq$ 2.75).
3. If two major courses and no GEE/GER courses remaining from Pre-Professional Years with Major Cumulative Grade  $\geq$  80% (MGPA $\geq$ 3.0).

## 2.2 Admission Requirements Graduate Program (PharmD)

Admission into the PharmD program takes place only in the fall semester of each academic year; therefore applicants must submit a complete application form no later than July 20<sup>th</sup> of the expected year of admission. Applicants who have earned their Bachelor degree of Pharmacy from Universities accredited by the Lebanese Ministry of Education and Higher Education can apply to the PharmD program if and only if their Major GPA is 3 or more, and have strong academic and nonacademic recommendations. As may be found necessary, applicants are also be required to sit for the English Placement Test (EPT) and take specific remedial courses. Furthermore, candidates will be interviewed by the Admission Committee as part of the admission procedure.

### 3. PHARMACY PROGRAM DEGREE REQUIREMENTS

#### 3.1 About the BPharm Program

The Bachelor of Pharmacy program is a five-year undergraduate program that prepares graduates to practice pharmacy as a profession and to register in the Lebanese Order of Pharmacists (OPL). The BPharm program is a total of 179 credits further divided into Pre-Professional (two years; 65 credits) and Professional pharmacy (three years; 114 credits).

The school of pharmacy at LIU is a national leader in pharmacy education and aims at delivering high quality education through an innovative and dynamic curriculum that incorporates depth and diversity of knowledge to reach the expected competencies that the graduates will obtain.

The BPharm curriculum is designed to prepare pharmacy graduates for lifelong learning and leadership capabilities as drug therapy experts and managers in the country's healthcare system. The school is among the few schools of pharmacy in Lebanon to establish a clinical curriculum from the beginning. The curricular philosophy is consistent with the goals, vision, mission and values of the school and the university. It implies preparing pharmacists to have the knowledge and skills to optimize patient care and treatment outcomes as an effective member of the health care team. This philosophy provides a strong educational basis in the biomedical, pharmaceutical, social, administrative and clinical sciences that will equip graduates with the appropriate competencies to excel in various fields of pharmacy and be dedicated to lifelong professional development.

The courses are arranged through the study plan in a way that ensures the progressive development of professional competencies. The first and second years (pre-pharmacy years) broaden the students' foundational knowledge in basic biological, physical and chemical sciences and general education. The curriculum of the professional program progresses through the third and fourth year with core competencies that are designed to guarantee the sequential progress through the main pharmaceutical sciences (origin of drugs, physicochemical systems, dosage forms, pharmacokinetics), biomedical and clinical sciences (pharmacology, pharmacotherapeutics, pharmacogenomics, lab data, physical assessment), and experiential education (pharmacy practice experience, PPE), precisely in community settings. In the fifth year, more advanced pharmacy courses are integrated, where students become competent in clinical pharmacy and therapeutics, over the counter drugs, pharmacoeconomics, toxicology, pharmacy dispensing practice, and pharmacy law. Moreover, the pharmacy students get to implement and further develop skills through inter-professional education during pharmacy practice experiences at different hospital settings, which enable them to communicate and discuss with diverse healthcare teams the selection of the most appropriate medicine for every patient at different divisions of healthcare units, at well-established high standard hospitals' wards. As such, their knowledge becomes oriented for application through a structured program that is designed to cover various aspects of clinical practice. As a result, this sharpens their skills and competencies before earning their degree.

## 3.2 Domain of Work

### 1. Academia and Research:

The “Academia” category may be loosely defined as belonging to a university faculty, usually that of a college of pharmacy. Working in academia can allow pharmacists to educate and inspire the next generation of healthcare professionals. Positions may range from the dean of a college of pharmacy to a teaching clinical pharmacy position at an off-campus site or to a classroom setting. Duties of an academic pharmacist may include administrative activities, scientific research, teaching professional student pharmacists, supervising research and teaching graduate students, speaking and/or publishing in scientific venues, student advising, and teaching student pharmacists through experiential practice sites.

### 2. Community Pharmacy:

Also known as a retail pharmacy, the community pharmacy is the most well-known type of pharmacy. A community pharmacist usually provides the community with access to the medications they need, as well as advice to promote the safe and effective use of the medicines they provide. They counsel patients on proper medication use and help prevent dangerous or troublesome combinations or side-effects of medication. Duties of a community pharmacist may also include: helping patients with the reimbursement of drug expenses, supervising pharmacy technicians and keeping inventory of the drugs stocked.

### 3. Governmental and Non-Governmental Institutions:

- a. Pharmacists in governmental institutions such as at the Ministry of Public Health, army, and Lebanese Order of Pharmacists. Within these settings, pharmacists can engage in a wide array of tasks, including direct patient care services, biomedical and epidemiological research, reviewing new drug applications, and developing and administering health care policy.
- b. Pharmacists in non-governmental organizations responsibilities include: management of the drug supply cycle, ensuring the distribution of the right drugs, and promoting public health awareness.

### 4. Hospital Pharmacy:

A hospital pharmacy is the place where the management of medications occurs in a hospital, medical clinic or nursing home. A hospital pharmacist often works in close collaboration with other health professionals to ensure that the medication regimen for each patient is optimized to achieve the best outcomes. They may also be involved with clinical trials, as well as compounding medications for individualized dosing or sterile medications. Teaching, administrative functions in the selection, proper storage, distribution and prescription protocols of drugs, education of medical staff in the aspects of selection, administration and monitoring of drug safety, as well as assessing drug levels and drug safety may all be part of their work. Hospital pharmacists may also specialize in one or other area of pharmacotherapy.

### 5. Clinical Pharmacy:

Clinical pharmacists work in hospitals, clinics, and other healthcare settings. They spend little time dispensing prescriptions. Instead, they are involved in direct patient care. Clinical pharmacists may go on rounds in a hospital with a physician or healthcare team. Their aim is to ensure the optimal use of medications for the best outcomes through the provision of drug information and monitoring for drug safety and efficacy. They can predict drug interactions and so prevent many adverse reactions to medication. They also may conduct some medical tests and offer advice to patients.

### 5. Pharmaceutical Company:

Pharmacists in pharmaceutical companies may work in the following areas: sales and marketing, regulatory affairs, scientific/ professional affairs (e.g., professional relations, professional education, and medical science liaison), and medical information.

## 6. Pharmaceutical Industry:

Pharmacists in Pharmaceutical industry work in the following areas: research and development, all phases of drug product development, manufacturing, sales and marketing, corporate administration, and quality control.

### 3.3 Program Learning Objectives

The school's program learning objectives are the following:

1. Develop, integrate and apply biomedical and therapeutic knowledge to provide patient-centered care and advance population health.
2. Assess medication use based on evidence-based medicine and patient profile to prepare, compound and dispense proper medications while counseling patients.
3. Utilize all available resources to provide and optimize patient-centered care.
4. Demonstrate a comprehensive approach to practice and care.
5. Exhibit commitment to the highest standards of professional attitude and behavior.
6. Engage in personal and professional development.

### 3.4 Program Learning Outcomes

The school's program learning outcomes are:

- Foundational Knowledge: The program equips the graduates to achieve understanding of established and evolving biomedical, pharmaceutical, clinical, social, behavioral sciences and demonstrate the ability to identify and assess new information relevant to a question and to apply this to clinical problem knowledge solving.
  - Learner: Develop, integrate, and apply knowledge from the foundational sciences (i.e., biomedical, pharmaceutical, social/ behavioral/administrative, and clinical sciences) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and patient-centered care.
  - Pharmaceutical Care: The program equips the graduates with the knowledge to assess medication use based on evidence-based medicine and rely on patient profile; compound and choose the correct dosage form and dispense medications while counseling patients.
  - Assessment of Medicines: Identify drug information and manage patient-centered care problems by applying clinical skills.
  - Compounding Medicines: Choose the appropriate dosage form based on patient's disease, preference and drug selection, in addition to pharmaceutical products preparation.
  - Dispensing: Dispense medications for patients in safe and effective ways by assuring accurate medication prescription, counseling patients and avoiding drug-related problems and errors.
- Essentials for Practice & Care: The program equips graduates to utilize all available resources in order to provide and optimize patient-centered care. In addition, the program helps the students know how to promote patient and population health.
  - Patient-centered Care: Provide individualized, evidence-based, and patient-centered care as the medication expert of the healthcare team or when communicating with patients.
  - Medication Use Systems Management: Manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems.
  - Promoter & Care Provider: Promote health and wellness at both individual and community level and describe how population-based care influences patient-centered care, the development of practice guidelines and evidence-based best practices.
- Approach to Practice & Care: The program equips the graduates with the knowledge, skills, abilities, behaviors, and attitudes necessary to solve problems, educate, advocate, collaborate, and conduct research, while working with people from diverse backgrounds, and effectively communicate verbally

and nonverbally.

- Problem Solver: Detect problems, develop potential strategies, and execute possible solutions.
- Collaborator: Collaborate with other healthcare professionals to manage the care of a patient through advising on therapeutic decision-making in a multi-professional team.
- Scholar: Applying medication therapy expertise, learning continuously, updating their knowledge and engaging in research.
- Cultural Sensitivity: Practice their duties as pharmacists to allow access to quality care for all patients without any discrimination.
- Communicator: Use appropriate communication skills (verbal and non-verbal) to build rapport and engage with patients and their caregivers, with other healthcare professionals, other support staff, and other relevant third parties.
- Professionalism: Demonstrate a commitment to the highest standards of professional responsibility, honesty and liability; adhere to ethical principles and moral reasoning in relation to patients, other healthcare professionals and society.
  - Practices Professionally: Exhibit behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers and society.
  - Practices Legally: Know, comprehend and comply with major policies and legislative procedures related to pharmaceutical products.
  - Practices Ethically: Demonstrate and embody ethical standards, principles and moral reasoning in all professional interactions with patients, families, other healthcare professional and society.
- Personal & Professional Development: The program equips the graduates to demonstrate a commitment to the personal development through continuous self-awareness; and to identify characteristics that reflect skills pertaining to leadership, management and innovation.
  - Self-Awareness: Examine and reflect personal knowledge, skills, abilities, beliefs, biases, motivations and emotions that could enhance or limit personal and professional growth.
  - Leadership and Management: Demonstrate responsibility for creating and achieving shared goals regardless of the positions.
  - Innovation: Demonstrate ability to introduce new ideas and methods.

### 3.5 Curriculum

#### The BPharm curriculum:

##### Pre-Professional Year 1

##### Fall Semester (16 credits)

Number	Course Name	Cr.
BIOL200	General Biology I	3
BIOL200L	General Biology I Lab	1
CHEM200	General Chemistry	3
CHEM200L	General Chemistry Lab	1
CULT200	Introduction to Arab - Islamic Civilization	3
ENGL201	Composition and Research Skills	3
PHAR200	Introduction to Drug Information	2

##### Spring Semester (17 credits)

Number	Course Name	Cr.
BIOL360	Human Physiology & Anatomy	4
BIOL360L	Human Physiology & Anatomy Lab	1
CSCI200	Introduction to Computers	3
CHEM250	Organic Chemistry I	3
ENGL251	Communication Skills	3
PHAR250	Pharmacy Practice, History & Ethics	3

## Pre-Professional Year 2

## Fall Semester (17 credits)

Number	Course Name	Cr.
*****	General Education I	3
BIOC310	Medical Biochemistry	4
MATH245	Statistics for Health Sciences	3
CHEM300	Organic Chemistry II	3
CHEM300L	Organic Chemistry Lab	2
PHAR300	Pharmaceutical Calculations	2

## Spring Semester (15 credits)

Number	Course Name	Cr.
*****	General Education II	3
BMED445	Pathophysiology	3
PHAR205	Quantitative Analysis	2
BIOL385	Microbiology	3
BIOL385L	Microbiology Lab	1
ARAB200	Arabic Language & Literature	3

## Professional Year 1

## Fall Semester (18 credits)

Number	Course Name	Cr.
PHAR400	Medicinal Chemistry I	3
PHAR407	Pharmaceutical Analysis & Biotechnology	2
PHAR407L	Pharmaceutical / Biotechnology Lab	1
PHAR410	Drug Dosage Forms I	3
PHAR420	Physical Pharmacy	3
PHAR425	Pharmacognosy & Herbal Medicine	3
PHAR435	Dermatology and Cosmetology	3

## Spring Semester (17 credits)

Number	Course Name	Cr.
PHAR415	Professional Communication	1
PHAR450	Medicinal Chemistry II	3
PHAR455	Physical Assessment in Pharmacy Practice	3
PHAR460	Pharmacy Management & Drug Marketing	3
PHAR465	Interpretation of Lab Data	3
PHAR472	Drug Dosage Forms II	3
PHAR472L	Compounding Lab	1

## Summer Semester (6 credits)

Number	Course Name	Cr.
PHAR480	Pharmacy Practice Experience I (PPE I)	6



## Professional Year 2

## Fall Semester (17 credits)

Number	Course Name	Cr.
PHAR---	Pharmacy Elective I	3
PHAR505	Pharmacology I	4
PHAR510	Biopharmaceutics & Pharmacokinetics	4
PHAR515	Pharmacotherapeutics I	3
PHAR520	Pharmacotherapeutics II	3

## Spring Semester (18 credits)

Number	Course Name	Cr.
PHAR---	Pharmacy Elective II	3
PHAR555	Pharmacology II	4
PHAR560	Pharmacogenomics	3
PHAR565	Pharmacotherapeutics III	3
PHAR570	Pharmacotherapeutics IV	3
PHAR585	Pharmacy Seminar	2

## Summer Semester (6 credits)

Number	Course Name	Cr.
PHAR580	Pharmacy Practice Experience II (PPE II)	6

## Professional Year 3

## Fall Semester (17 credits)

Number	Course Name	Cr.
PHAR606	Non-Prescription Drugs	3
PHAR610	Toxicology	3
PHAR615	Pharmacotherapeutics V	3
PHAR620	Pharmacotherapeutics VI	3
PHAR625	Pharmacoeconomics	3
PHAR635	Parenteral Dosage Forms	2

## Spring Semester (15 credits)

Number	Course Name	Cr.
PHAR650	Pharmacy Dispensing Practice	2
PHAR656	Pharmacy Law	1
PHAR660	Pharmacy Practice Experience III (PPE III)	6
PHAR665	Pharmacy Practice Experience IV (PPE IV)	6

## Pharmacy Electives

Number	Course Name	Cr.
PHAR530	Clinical Nutrition	3
PHAR531	Introduction to Epidemiology and Biostatistics	3
PHAR532	Special Topics: Geriatrics and Palliative Care	3
PHAR533	Special Topics: Ambulatory Care & First Aid	3
PHAR534	Special Topics: Immunization & Vaccination	3
PHAR540	Pharmacy Careers	3
PHAR541	Hospital Pharmacy	3

PHAR590	Industrial Pharmacy	3
PHAR591	Instrumental Analysis	3
PHAR592	Special Techniques in Antimicrobial Resistance	3

### The Pharm D curriculum:

#### Fall Semester (15 credits)

Number	Course Name	Cr.
PHAR710	Advanced Pharmacy Practice Experience I (Community)	2
PHAR711	Advanced Pharmacy Practice Experience II (IM)	4
PHAR712	Advanced Pharmacy Practice Experience II (CCU)	4
PHAR713	Advanced Clinical Pharmacokinetics	2
PHAR715	PharmD Project Part I	3

#### Spring Semester (15 credits)

Number	Course Name	Cr.
PHAR760	Advanced Pharmacy Practice Experience II (ICU)	4
PHAR761	Advanced Pharmacy Practice Experience II (Elective I)	2
PHAR762	Advanced Pharmacy Practice Experience II (Pediatrics)	4
PHAR763	Advanced Pharmacy Practice Experience II (Elective II)	2
PHAR765	PharmD Project Part I	3

### 3.6 Course Description

Course Code and Title	Course Description
<b>PHAR 200: Introduction to Drug Information</b>	This course introduces students to basic principles of drug information including, medical terminologies and drug monograph. In addition, students learn how to identify the different parts for the SOAP note. The course also provides students with the knowledge to write drug consults and drug utilization review. The course helps students to recognize the different literature resources available, different types of a study design and apply basic biostatistics calculations.
<b>PHAR 205: Quantitative Analysis</b>	This course introduces the fundamental principles of quantitative chemical analysis, including basic statistics, chemical equilibria (solubility, acid-base, complexation, precipitation, and redox titrations), electroanalytical techniques and introductory spectroscopy. It provides the students with experimental insights and skills in quantitative analysis through conduction of experiments with direct relevance for work in professional and academic laboratories (e.g., statistical evaluation of data, buffer and pH calculations, EDTA titrations and analysis of real samples when possible). The course also familiarizes the students to independently plan and conduct chemical analysis following proper analytical procedures and relevant safety regulations, analyze data, draw conclusions and solve problems with scientific rationale.
<b>PHAR 250: Pharmacy Practice and Ethics</b>	This course emphasizes upon the historical background and major milestones in the evolution of pharmacy from apothecaries to clinical pharmacy. The first part for this course deals with pharmacy history present and future. The second part deals with pharmacy practice including major medical terms and abbreviations, function for international pharmaceutical organizations, and overview about drug classes and dosage forms. The last part deals with ethical principles governing patient–pharmacist relationship and research.
<b>PHAR 300: Pharmaceutical Calculations</b>	This course provides students with the knowledge and skills needed to mix medications to obtain concentration/dose, to convert measurements from the metric system to the apothecary system and vice versa, to calculate doses needed for pediatrics or adults, to mathematically adjust medication doses in case of renal or hepatic impairment, and to interpret correctly standard abbreviations and symbols used in prescriptions and medication orders.
<b>PHAR 400: Medicinal Chemistry I</b>	Medicinal Chemistry is divided into two courses: PHAR 400 & PHAR 450. Medicinal Chemistry I is the introductory course that helps the students to explore drug discovery and development. It employs basic principles of organic chemistry, biology, and biochemistry. It familiarizes students with the discovery of the mechanism of action of drugs within organisms in order to design new and advanced pharmaceutical and medicinal agents. This interdisciplinary course highlights the importance of knowledge obtained from toxicology, pharmacology, computer simulations, and clinical practice to provide valuable insights used in developing drugs with more targeted actions and fewer side effects.
<b>PHAR 407: Pharmaceutical Analysis and Biotechnology</b>	The course introduces the fundamental principles of modern instrumental methods used in pharmaceutical analysis, including the theoretical background and calculations needed, with their applications for identifying, separating and quantifying drugs. Instrumentations discussed within this course fall into:

	<p>Spectroscopic methods (UV-Visible, IR and Atomic Absorption), chromatographic methods (TLC, HPLC and GC), and electroanalytical methods. The course also provides students with knowledge about the analytical method validation parameters (precision, accuracy, linearity, limits of detection and quantitation, sensitivity and selectivity). The physiochemical properties of the analyte are presented with emphasis about the possibly interfering matrix components and control of the analytical errors.</p>
<p><b>PHAR 407L: Pharmaceutical Biotechnology Lab</b></p>	<p>The course provides the students with practical experience of the instrumental methods used in pharmaceutical analysis; including UV-visible spectrophotometry, chromatographic methods (column, TLC and HPLC), polarimetric assays, conductometric titrations and enzymatic methods.</p> <p>The course presents the underlying principles guiding the instrument operation, instrument components, and the nature of the data generated by the instrument for each method discussed. Moreover, the course covers the basic principles in data analysis, error analysis and calibration.</p>
<p><b>PHAR 410: Drug Dosage Forms I</b></p>	<p>This course introduces pharmacy students to the principles, practices, and technologies applied in the preparation of pharmaceutical dosage forms and drug delivery systems. It demonstrates the interrelationships between pharmaceutical and biopharmaceutical principles, product design, formulation, manufacture, compounding, and the clinical application of various dosage forms in patient care. Regulations and standards governing the manufacturing and compounding of pharmaceuticals such as Good Manufacturing Practice (GMP) are also discussed in this course.</p>
<p><b>PHAR 420: Physical Pharmacy</b></p>	<p>This course explores the application of physical chemical principles in relation to pharmaceutical sciences. Physical and theoretical foundations are discussed and applied and problem solving is emphasized. This course helps pharmacy students in using foundational elements of mathematics, chemistry, and physics in their pharmacy-related work and study.</p>
<p><b>PHAR 425: Pharmacognosy &amp; Herbal Medicine</b></p>	<p>The course introduces students to natural products and other bioactive molecules from nature, their origin, identification, development, and usage. Furthermore, it identifies the chemical structure, classes and structure-activity relationships of natural products. Moreover, the course identifies the importance of natural products as major ingredients used within drug manufacturing.</p>
<p><b>PHAR 435: Dermatology and Cosmetology</b></p>	<p>This course introduces pharmacy students to important aspects of dermatologic diseases, focusing on their common manifestations and the appropriate pharmacotherapy. The course addresses the assessment, treatment and referral of disorders affecting the skin, nail, hair or mucous membranes. Since pharmacists encounter several questions regarding general hygiene and cosmetic elegance, the second part of the course focuses on pharmaceutical cosmetology that provides basic and modern knowledge of optimal skin management and hair care.</p>
<p><b>PHAR 415: Professional Communication</b></p>	<p>This course is designed to teach strategies students can use to improve communication with patients and other health care providers. Students attain the essential communication skills, and competency to approach patients and provide care. Students are engaged into different role plays that direct various conflicts that might arise in community settings with diverse patient population or health care professionals. In addition, students learn and demonstrate the</p>

	skills to promote and communicate health messages through pharmacy day projects. Students also have the opportunity to work in a team while they are preparing for the pharmacy day or awareness projects for the community.
<b>PHAR 450: Medicinal Chemistry II</b>	Medicinal Chemistry is divided into two courses: Phar 400 and Phar 450. Medicinal Chemistry II helps students to explore the principal classes of prescription drugs including neurologic, anesthetic, analgesic, anti-inflammatory, anti-bacterial, and cardiovascular agents. It familiarizes the students with the indications of neurologic, anesthetic, analgesic, anti-inflammatory, anti-bacterial, and cardiovascular agents, along with their related pharmacokinetics, pharmacodynamics and pharmacological profile.
<b>PHAR 455: Physical Assessment in Pharmacy Practice</b>	This course is designed for students of health care who are learning to talk with patients and to perform their physical examination. The first few chapters provides an overview of the patients interview and physical examination, the techniques of skilled and effective interviewing, and general survey of the patient and the vital signs that begin physical examination. The subsequent chapters are devoted to the techniques of examination of various body regions or systems.
<b>PHAR 460: Pharmacy Management and Drug Marketing</b>	The aim of the course is to teach pharmacy students that superior patient care and good pharmacy business are not mutually exclusive and to familiarize the student with the management functions and resources common to all pharmacy practice settings including managing people, money, operations, traditional goods and services as well as managing risks and value-added services. Also, this course helps students to acquire leadership skills.
<b>PHAR 465: Interpretation of Lab Data</b>	This course is an introduction to the fundamentals of interpreting laboratory test results that illustrates how the results of a particular laboratory test should be interpreted, and allow students make accurate and critical diagnostic decisions. It provides pharmacy students with essential information on common laboratory tests used to screen for or diagnose disease, monitor the effectiveness and safety of treatment, or assess disease severity. Each laboratory test is described in terms of its clinical uses and relation to the pathophysiology of the disease.
<b>PHAR 472: Drug Dosage Forms II</b>	This course is the second part of the drug dosage form courses that are designed to flow logically. This part focuses on the design, formulation, manufacture, and testing of suppository dosage forms and other complex or novel dosage forms and drugs that were not covered in Drug Dosage Form I.
<b>PHAR 472L: Compounding Lab</b>	This course is the practical part of the two series of dosage form courses that deal with different formulations and drug delivery systems focusing on the rational and the significance of each dosage form. The course will help the students to demonstrate the skills in preparing different dosage forms in the lab based on guidelines and pharmacopeias.
<b>PHAR530: Clinical Nutrition</b>	This course presents the principles and practice of scientifically-based clinical nutrition in pharmacy settings. It introduces the students to nutritional assessment in various medical conditions with emphasis on understanding that there are different expressions of imbalances and/or dysfunction that are preventable and correctable in many cases.
<b>PHAR531: Introduction to Epidemiology and Biostatistics</b>	This course is offered as an introduction to epidemiology and biostatistics for undergraduate pharmacy students and it consists of two modules. The first module is an introduction to epidemiology, which provides the basis of

	understanding of epidemiological aspects of the occurrence and distribution of diseases in human populations, predominantly focusing on basic epidemiological terminology, measures, and research methods. The second module is the basic biostatistics, which focuses on the methods of data collection, analysis and presentation of health-related data, mainly concentrating on odds ratios, confidence intervals, proportions, 2x2 tables, and hypothesis testing.
<b>PHAR532 Special Topics: Geriatrics and Palliative Care</b>	This course introduces the concept of optimizing medication use in the geriatric population and discusses palliative care along with highlighting the role of the pharmacist.
<b>PHAR533: Special Topics: Ambulatory Care &amp; First Aid</b>	This course involves the evaluation of drug utilization, and synthesis of rational drug regimens in the context of ambulatory care. Moreover, it presents the basic medical emergencies that a pharmacist may encounter in daily life, and allows the student to properly evaluate the real status of the patient during and emergency, assess the risk, identify the urgency of a problem, and how to provide first medical aid.
<b>PHAR534: Special Topics: Immunization &amp; Vaccination</b>	This course involves the evaluation of drug utilization, and synthesis of rational drug regimens in the context of immunization, along with a comprehensive overview of the complex and ever changing topic of vaccination for pharmacists.
<b>PHAR540: Pharmacy Careers</b>	This course is the bridge between the academic education and the professional working life. It aims to give the students the required communication and presentation skills, and the interview techniques to gain quickly an entry-level job in this highly demanding field. This course will introduce the students to the market place and identify the available outlets for fresh pharmacy graduates. In addition, it will familiarize the students with the required skills to help them in securing an early integration and adaptation into their new job.
<b>PHAR541: Hospital Pharmacy</b>	The course allows the student to recognize the pharmacist administrative and technical services in the hospital. It comprises different aspects of hospital administration, patient care activities and pharmacist technical services in the hospital, as well as hospital medication distribution systems.
<b>PHAR 505: Pharmacology</b>	<p>This course introduces the underlying principles of pharmacology and provides an overview of the physiological, biochemical, and anatomical foundations for the interaction of drugs and chemicals with biological systems.</p> <p>The course includes a systematic study of the effects of drugs on different organ systems and disease processes, the mechanisms by which drugs produce their therapeutic and toxic effects, and the factors influencing their absorption, distribution and biological actions. Specific drugs and sites of drug action are further examined beginning with the peripheral, followed by the central nervous system, and drugs used to treat inflammation.</p>
<b>PHAR 510: Biopharmaceutics &amp; Pharmacokinetics</b>	This course introduces the concepts of biopharmaceutics and pharmacokinetics. It highlights the process of absorption, distribution, metabolism, and excretion of drugs in order to improve the evaluation of drug delivery systems and the management of patients. It helps students to understand the clinical variability of drug response through exploring the relationships among physiological factors, compartmental models, pharmacokinetics and pharmacodynamics.
<b>PHAR 515:</b>	This course identifies the pathophysiology, etiology, risk factors and signs and symptoms of most common neurologic and psychiatric disorders. It provides the

<b>Pharmacotherapeutics I</b>	non-pharmacologic and pharmacologic treatment options according to evidence-based guidelines. It introduces the students to the application of pharmacologic and pharmacokinetic parameters, and description of factors that would guide the selection of the best treatment options. It also familiarizes the students with how to evaluate the treatment therapy for psychiatric and neurologic diseases through highlighting on the monitoring parameters and important medications' adverse effects. The student applies problem-solving strategies to patient-oriented cases and develops patient treatment plan.
<b>PHAR 520: Pharmacotherapeutics II</b>	This course identifies the pathophysiology, etiology, risk factors and signs and symptoms of most common pulmonary, gastrointestinal, and rheumatological diseases. It provides the non-pharmacologic and pharmacologic treatment options according to evidence-based guidelines. It introduces the students to the application of pharmacologic and pharmacokinetic parameters, and description of factors that would guide the selection of the best treatment options. It also familiarizes the students with how to evaluate the treatment therapy for pulmonary, gastrointestinal, and rheumatological diseases through highlighting on the monitoring parameters and important medications' adverse effects. The student applies problem-solving strategies to patient-oriented cases and develops patient treatment plan.
<b>PHAR590: Industrial Pharmacy</b>	This course addresses scientific knowledge of regulatory aspects of pharmaceutical industry with various guidelines, and quality systems. It familiarizes the student with manufacturing of various pharmaceutical dosage forms along with patent knowledge, material management, and various analytical techniques required to evaluate dosage forms.
<b>PHAR591: Instrumental Analysis</b>	This course addresses the theory and practice of instrumental methods for the separation, identification and quantitative analysis of chemical substances.
<b>PHAR592: Special Techniques in Antimicrobial Resistance</b>	This course describes some of the common techniques and molecular methods currently used for the detection of antimicrobial resistance.
<b>PHAR 555: Pharmacology II</b>	<p>This course focuses on the drug classes that cover cardiovascular, anti-diabetic, and chemotherapeutic agents. It includes a systematic study of the effects of drugs on different organ systems and disease processes, the mechanisms by which drugs produce their therapeutic and toxic effects, and the factors influencing their absorption, distribution and biological actions.</p> <p>Specific drugs and sites of drug actions are further examined beginning with cardiovascular drugs, followed by anti-diabetic agents, antifungal agents, antibiotics, and cancer chemotherapeutic agents.</p>
<b>PHAR 560: Pharmacogenomics</b>	This course introduces basic molecular genetics to the students and how genetics could be used to explain the possible variability in drug response. It familiarizes the students with the pharmacogenetics of drug transport and metabolism, with their relevance to clinical practice and individualization of drug therapy, along with updates on candidate pharmacogenomic testing. The course also explores the current and promising future applications of pharmacogenomics in areas of oncology, hematology, cardiovascular and neurological diseases, organ transplantation, and others. Key principles and applications of gene therapy are reviewed. The course helps the students to interpret the results of



	pharmacogenomic association studies in order to comprehend variability in drug response and toxicity based on genetic polymorphism.
<b>PHAR 565: Pharmacotherapeutics III</b>	This course identifies the pathophysiology, etiology, risk factors and signs and symptoms of most common cardiovascular and renal disorders. It provides the non-pharmacologic and pharmacologic treatment options according to evidence-based guidelines. It introduces the students to the application of pharmacologic and pharmacokinetic parameters, and description of factors that would guide the selection of the best treatment options. It also familiarizes the students with how to evaluate the treatment therapy for cardiovascular and renal disorders through highlighting on the monitoring parameters and important medications' adverse effects. The student applies problem-solving strategies to patient-oriented cases and develops patient treatment plan.
<b>PHAR 570: Pharmacotherapeutics IV</b>	This course identifies the pathophysiology, etiology, risk factors and signs and symptoms of most common endocrinologic and women's health related disorders. It provides the non-pharmacologic and pharmacologic treatment options according to evidence-based guidelines. It introduces the students to the application of pharmacologic and pharmacokinetic parameters, and description of factors that would guide the selection of the best treatment options. It also familiarizes the students with how to evaluate the treatment therapy for endocrinologic and women's health-related disorders through highlighting on the monitoring parameters and important medications' adverse effects. The student applies problem-solving strategies to patient-oriented cases and develops patient treatment plan.
<b>PHAR 585: Pharmacy Seminar</b>	The course is intended to improve and broaden the pharmacy students' knowledge as well as their communication skills through performing thorough research on relevant topics that represent a challenge in the medical field. In addition, this course enables students to acquire skills in biomedical literature evaluation in which they are asked to search and conduct an evaluation for a primary literature. The early exposure of students to journal clubs during their pharmacy education is a scholastic tool that can improve students' ability to interpret up-to-date clinical evidence and apply it to practice.
<b>PHAR 606: Non-Prescription Drugs</b>	This course develops pharmacy students' knowledge and problem solving skills needed to assess patient's health status and practice self-treatment. Also, it introduces them to nonprescription medications approved by FDA along with nonpharmacological measures recommended to treat certain conditions. It highlights on conditions where self-treatment cannot be applied and referral to a primary care provider is needed. To add, it trains them on the proper selection of nonprescription medications and the use of certain devices. It also focuses on patient education and counseling regarding self-treatment and health-related issues.
<b>PHAR 610: Toxicology</b>	<p>This course presents the basic principles of toxicology including areas of toxicology, factors affecting toxicity in humans, and disposition of toxins in human body.</p> <p>The course also provides students with knowledge about diagnostic measures and clinical management (i.e. stabilization of vital function and specific antidotal measures) of poisonings. Poisoning with common groups of chemicals (pesticides, metals, solvents and common drugs) are presented including,</p>

	mechanism of toxicity, sources of exposure, major clinical manifestation and methods of treatment.
<b>PHAR 615: Pharmacotherapeutics V</b>	<p>The traditional practice of pharmacy has evolved over the past three decades from a practice primarily focusing on the preparation of medications to a practice primarily emphasizing on rational pharmacotherapeutics. The need for selecting the most appropriate medication, regimen, and dose while minimizing problems such as drug interactions, adverse drug reactions, and IV incompatibilities has become central to this new patient-focused approach.</p> <p>Endemic and epidemic infectious diseases present a challenging field to pharmacists and other healthcare professionals. Infections caused by different pathogens in different areas of the body can lead to complications if left untreated. Pharmacists have an important role in this field to rationalize treatment, prevent the emergence of antibiotics resistance, and minimize cost.</p>
<b>PHAR 620: Pharmacotherapeutics VI</b>	This course enables the students to develop knowledge regarding the pathophysiology of the most common cancer diseases, risk factors, prevention, and treatment approaches based on updated guidelines. Through this course students develop their knowledge and clinical skills in preventing adverse reactions related to the diseases or related treatment. In addition, students explore detailed information regarding the most updated treatment for the most common types of solid and liquid tumors.
<b>PHAR 625: Pharmacoeconomics</b>	This course presents an overview of the concept of pharmacoeconomics, and related models including cost-minimization analysis, cost effectiveness analysis, cost utility analysis, cost benefit analysis, and cost of illness evaluation. The course provides students with knowledge on different types of costs and benefits and identifies formulary decisions that are deemed necessary to regulate the pharmaceutical market. It enables the students to utilize the Markov Modeling and discount rates, appraise pharmacoeconomic literature, and conduct a decision analysis plan.
<b>PHAR 635: Parenteral Dosage Forms</b>	This course introduces the students to all aspects of parenteral products, and demonstrates the relevance between drug delivery optimization and therapeutic outcomes. It also describes the pharmacy environment appropriate for parenteral products preparation and sterile compounding as defined by USP Chapter <797>. Through this course students also demonstrate skills related to parenteral preparations.
<b>PHAR 650: Pharmacy Dispensing Practice</b>	The pharmacy dispensing practice course is a highly interactive laboratory session inside a virtual pharmacy (simulation setting). This simulation lab aims to heighten students' knowledge about medications and patient education, and develop their communication skills. Student learn to dispense over the counter (OTC) and prescription medications accurately and safely, counsel patients efficiently and properly, manage effectively any conflict that might arise between the pharmacist and the patient or between the pharmacist and other health care professionals (physicians, pharmacist) and acquire leadership skills.
<b>PHAR 656: Pharmacy Law</b>	This portion of the Law and Ethics in Pharmacy Practice focuses on pharmacy law. The course covers the Lebanese pharmacy rules and regulations that impact and regulate the practice of pharmacy. Topics including the regulation of medications, regulation of controlled substances, and the rules concerning

	pharmacy practice on the Lebanese territories are extensively covered.
<b>PHAR 660: Pharmacy Practice Experience III (PPE III)</b>	Pharmacy Practice Experience III and IV (PPE III/IV) are a series of fifteen weeks designed to provide students the opportunity to further develop their skills and knowledge base in pharmacy practice. The internship is fifteen weeks in length, three weeks of which each student is under the direct supervision of the onsite hospital pharmacist and assigned faculty member preceptor. The student's major tasks are accomplished within the hospital pharmacy premises. The remaining twelve weeks are referred to as the Clinical Care Rotation, during which the intern is assigned to a medical team in different wards. The intern will be on the floors with the health care professionals, by patient bedside and consulting charts under the supervision of onsite pharmacist and assigned faculty member. Each student completes three major rotations and one elective rotation. The length of each rotation is three weeks. Students have also the opportunity to rotate in a tertiary hospital
<b>PHAR 665: Pharmacy Practice Experience IV (PPE IV)</b>	

### 3.7 Pharmacy Practice Experiences

Experiential Learning Program consists of a successive set of experiences in which students learn and enhance their patient care and pharmacy practice skills in a variety of actual practice sites. During the Pharmacy Practice Experience (PPE) courses, students learn how to apply the didactic education to various pharmacy practice settings, facilitating the transition of the student into a competent, confident, caring, and practice-ready pharmacist.

The Experiential Learning Program is a critical component of the students' pharmacy education, accounting for 9 months of internship in different areas as community practice, hospital practice, and institutional practice. Additionally, students should acquire 3-month experience during his/her pre-professional years.

The Pharmacy Practice Experience Courses (PPEs) are divided as follow:

- + Pharmacy Practice Experience I (PPE I) in the First professional year, where students practice for a 3-month period in a community pharmacy.
- + Pharmacy Practice Experience II (PPE II) in the Second professional year, where students practice for a 3-month period in a community pharmacy.
- + Pharmacy Practice Experience III and IV (PPE III & IV) in the Third professional year where students practice for a 15-week period in hospital and medical center sites.

During all above clerkships, a student will learn under the supervision of a faculty member preceptor and the on-site pharmacist preceptor. A clerkship manual will be distributed to each student during each rotation. In addition to daily practice at the site, students will meet regularly with their preceptors and their classmates for discussions and assessments.

### 3.8 Advanced Pharmacy Practice Experiences

The doctor of pharmacy (PharmD) program is an advanced clinical-based experiential education that prepares the students to become proficient in direct patient care. The program, which is delivered over one year, is rigorous, yet flexible, innovative, and intellectually exciting. It consists of Advanced Pharmacy Practice Experiences (APPEs) that designed to provide pharmacy students with the opportunity to become a member of the pharmacy healthcare team. Depending on the rotation, APPEs take place in a variety of settings in order to expose students to both traditional and nontraditional career opportunities within the profession.

The APPE of the program consists of six clinical and one community rotations. The advanced practice clinical rotations are further divided into major and elective rotations. These APPE rotations should reinforce and continue the development of skills and knowledge students received during their Bachelor of Pharmacy curriculum. The APPEs should also provide students the opportunity to serve various patient populations in a variety of settings and to collaborate with other healthcare professionals. These experiences should offer exposure to patients and disease states that clinical pharmacists are likely to encounter in practice. The students will work under the supervision of a licensed doctor of pharmacy, the preceptor, at all times during the APPEs.

## **4. ACADEMIC EXPECTATIONS, POLICIES, AND PROCEDURES**

### **4.1 Student Grievance**

Students' grievances are addressed by the school's Grievance Committee. The committee has set fair processes to tackle different grievances related to misconduct, student-student, and student-faculty issues. The committee schedules a meeting with involved individual(s) to expeditiously assess the concerned issue. The committee's recommendations are then communicated by the committee's chairperson to the dean's office for final decision. The final report is then documented and kept as a future record at the assistant dean's office, after being communicated and signed by the involved parties.

### **4.2 Appeal Process**

A student petition form, along with supportive evidence, constitutes a case document, which is submitted to the dean's office. The dean discusses the complaint with the corresponding department's chair and faculty member. The committee then reports its recommendations and decision on the same form. The response is communicated to the student by the assistant dean's office.

### **4.3 Accommodations of Students with Disabilities**

The school is committed to the goal of achieving equal educational opportunities and full participation in higher education for persons with disabilities. In accordance with this, students in need of accommodations due to a disability should contact the Student Learning Committee at the beginning of each semester.

### **4.4 Class Recordings**

Photography, audio-visual recording, and transmission/distribution of classroom lectures and discussions are prohibited. Recordings of previous lectures should not be reproduced, shared, or uploaded to publicly accessible web environments. Students who do not adhere to this policy will be considered to be breaching the school's copyrights and will be referred to the Grievance Committee.

### **4.5 Class Attendance**

Attendance is mandatory for all courses. Students cannot miss more than one third of the course time (even with eligible excuses), otherwise they will be automatically receiving an AW (Academic Withdraw) according to the university law.

For laboratory sessions, only one make-up may be given for absent students with legitimate excuses.

### **4.6 Late or Missing Assignments**

All activities, assignments, projects, and other works related to any of the courses are to be completed and submitted on time. Failure to meet the deadline may result in considering the assignment missing with no grades received as such.

### **4.7 Examination Date/Schedule Policy**

Examination time and date for all courses are pre-scheduled by the school and are mentioned in the syllabus and posted on the school's bulletin board, and on the school's website.

## 4.8 Makeup Exam Policy

In general, no make-up exams will be offered to students who absent themselves on any scheduled pharmacy exam.

The instructor may elect to give a make-up exam after approval of the school in very restricted cases (death of a first degree relative, car accident with an official report, or student hospitalization for more than one day with a discharge summary).

The student is responsible to submit all the required documents and papers to justify his/her absence.

Students may submit a petition for a make-up examination within one week from the exam date and time but not later.

Students who fail the course after make-up examinations will be dropped automatically from the registered prerequisite courses.

## 4.9 Cheating Policy

Cheating in any way or form will not be tolerated during exams and will be considered as evidence of academic dishonesty. Students will be referred to the Grievance Committee and an F will be posted on the exam.

The following items are not allowed to be accessed during the exam: cell phones, other electronic or digital devices including smart watches, pagers, photographic devices, and recording devices. Any watches must be placed on the top of the desk for proctor review.

**Plagiarism:** It is unacceptable to copy and pass off as one's own the ideas or words of another without properly crediting the source. Turnitin, the university's designated plagiarism checker, may be used on any submitted written work. Instances of inappropriate or unacceptable academic behavior will be treated on a case by case basis with the consequences ranging from no credit on the assignment for those involved to automatic failure of or removal from the course.

## 5. ACADEMIC ADVISING, REGISTRATION POLICIES AND PROCEDURES

### 5.1 Academic Advising: advisor-student relationship

**Advisor Responsibilities:** The student can expect his/her Pharmacy Academic advisor to:

- Understand and effectively communicate the curriculum, graduation requirements, and university and school of pharmacy policies and procedures.
- Encourage and guide students as they define realistic academic goals.
- Provide students with information about and strategies for utilizing the available resources and services on campus.
- Monitor and accurately document discussions regarding the students' progress toward meeting their goals.
- Promote and encourage students to develop productive working relationships with their instructors.

**Student Responsibilities:** Students are expected to have clear responsibilities in order for the advising partnership to be successful. Among those responsibilities are the following:

- Speak respectfully to faculty members and other students at the school of pharmacy.
- Schedule appointments or make regular contacts with the advisor each semester.
- Come prepared to each advising appointment with questions or materials to discuss academic progress; personal, career goals; interests and concerns.
- Ask questions when he/she doesn't understand an issue or have a specific concern.
- Accept responsibility for personal, academic and career decisions.
- Respond to official notification from the school in a timely manner.
- Use the University e-mail, which is the official means of communication for the University, on a regular basis.

#### **When to see an advisor:**

All pharmacy students are required to meet with an academic advisor during their first semester. After that, students in good academic standing only need to meet with an advisor as needed. The most common reason a student will meet with an advisor is to resolve registration issues. However, students should seek academic advisement anytime they need to discuss something that could impact their academics or their ability to remain at the school such as, having difficulty with classes, financial problems, health issues or personal problems.

Students who have been placed on academic probation or are struggling in their classes may also require meeting with an advisor.

### 5.2 Registration and Course Load

Registration during the assigned dates is required of all students in accordance with the posted procedure and regulations. In order to register for a course, students must have completed all the prerequisites for that course; an "I" (incomplete) grade in any prerequisite is not accepted.

A full-time load in a regular semester is 12 credits and the maximum is 19 credits. During the summer semester, a maximum of 2 courses could be registered (a maximum of 8 credits). Students with a cumulative G.P.A. of 3.00 and above are allowed to carry up to a maximum of 21 credits for the last two semesters upon the approval of the school.

### 5.3 Course Withdrawal

A student can withdraw (W) from registered courses before the final exam to avoid getting a failing grade. Withdrawal period is between week 11 and 14 of a semester. By this time, student would know his/her grades on midterms 1 and 2. Withdrawn courses do not affect overall grade average.

### 5.4 Course Academic Withdrawal

A student who misses more than one third of a given course class time is automatically dropped from the course, and is assigned an AW (academic withdrawal) status.

### 5.5 Grading System & Quality Points

#### Grade-Point Average (GPA):

- Is the ratio of the total grade points earned to the total credit hours attempted.

Excluding courses with grades of "W", "AW" or "I".

- Total grade points:

Multiplying the grade points assigned to the grade by the number of credit hours.

- Cumulative GPA (cGPA)

Represents an average of all final grades.

- Major GPA (mGPA)

Represents an average of all Major and Core courses grades.

#### The students' grades are transferred to GRADE POINTS:

Cumulative Average	GPA	Letter Grade	Cumulative Average	GPA	Letter Grade
<60	0	F	75	2.5	C+
60	1	D	76	2.6	
61	1.1		77	2.7	
62	1.2		78	2.8	
63	1.3		79	2.9	
64	1.4		80	3	B
65	1.5	D+	81	3.1	
66	1.6		82	3.2	
67	1.7		83	3.3	
68	1.8		84	3.4	
69	1.9		85	3.5	B+
70	2	C	86	3.6	
71	2.1		87	3.7	
72	2.2		88	3.8	
73	2.3		89	3.9	
74	2.4		>=90	4	A

#### Cumulative Grade Point Average (cGPA)

- Based on Major, Core, GEE, & GER courses (excluding remedial courses)
- $cGPA = \frac{\text{Quality points}}{\text{(Passed + Failed) Credits}}$



**Major Grade Point Average (mGPA)**

- GPA for all major and core courses
- $mGPA = (\text{Major and Core}) \text{ Quality points} / (\text{Major and core}) \text{ credits}$

**Passing Grades:**

- All major and core courses:  
70% or a letter grade of C
- GEEs and GERs:  
60% or a letter grade of D
- Remedial Courses:  
50%

**5.6 Minimum GPA Requirements**

Students must maintain a minimum GPA of 2.00 to remain in good/acceptable academic standing.

**5.7 Academic Probation**

A student will be placed on probation if after completing 20 credits his/her major GPA and/or cumulative GPA are less than 2.00.

A student who is on probation is advised to repeat failed courses in which he/she has received an F or D grades and he/she will not be allowed to register more than 14 credits per semester (four courses, and two lab courses).

A student is obliged to change his/her major if he/she receives probation in four consecutive semesters.

**5.8 Academic Suspension**

A student who fails or does not make timely progress in a course or courses while in the school of pharmacy may be placed on suspension. Additionally, a student who fails to comply with the school's conduct policy, or academic and/or programmatic requirements may be placed on suspension.

**5.9 Academic Dismissal**

A student is not allowed to remain in the school of pharmacy for more than 8 years where four years are in the pre-pharmacy and four years in the professional program.

Once dismissed, a student cannot be readmitted to the school of pharmacy.

**5.10 Remediation**

A course can be repeated twice at the most, and attendance in repeated courses is obligatory.

A student who fails a course must repeat the course in the following semester or as soon as the course is offered again in order to avoid delays in graduation.

The highest grade of a repeated course is considered in calculating the GPA.

### 5.11 President and Dean's List

Following each semester, President List recognition will be provided to all students in the school who achieved a GPA of 4 in a minimum 12 credits for the semester.

Following each semester, Dean's List recognition will be provided to all students in the school who achieved a GPA of 3.50 or better in a minimum 12 credits for the semester.

### 5.12 Pharmacy Practice Experiences Eligibility Criteria

#### Pharmacy Practice Experience I (PPE I)

- A student is eligible to register the PPE I course if he or she has completed and passed all prerequisite courses offered in the fall and spring semester for the first professional year.
- Students are not allowed to take this course if they had a **total of four failing grades (F or D or W or N)** on four major courses from the first professional year or major/non-major from the 1<sup>st</sup>/2<sup>nd</sup> pre-pharmacy years.
- **One exception:** if one of these four courses is offered in the summer and therefore is registered by the student at the same time with PPE I.

#### Pharmacy Practice Experience II (PPE II)

- A student is eligible to register the PPE II course if he or she has completed and passed all prerequisite courses offered in the fall and spring semester for the second professional year and passed the PPE I course.
- Students are not allowed to take this course if they had a **total of four failing grades (F or D or W or N)** on four major courses from the first/second professional years or major/non-major from the 1<sup>st</sup>/2<sup>nd</sup> pre-pharmacy years.
- **One exception:** if one of these four courses is offered in the summer and therefore is registered by the student at the same time with PPE II.

#### Pharmacy Practice Experience III/IV (PPE III/IV)

- A student is eligible to register the PPE III/IV courses if he or she has completed and passed all prerequisite courses offered in the fall and spring semester for the third professional year and passed the PPE I and PPE II.
- Students are not allowed to take this course if they had a **total of two failing grade (F or D or W or N)** on two major courses from the first/second/third professional years or major/non-major from the 1<sup>st</sup>/2<sup>nd</sup> pre-pharmacy years.

## 6. TRANSFER STUDENTS

### 6.1 Transfer Criteria from Other Universities

Courses taken at Universities, accredited by the Lebanese Ministry of Education and Higher Education, are transferable by the Lebanese International University. Course transfer criteria adopted by the school of pharmacy is only applicable as follows:

- a. Applicants who hold a Bachelor degree in Biomedical Sciences from an accredited university can apply as a transfer student to the Pre-Pharmacy Program in the school of pharmacy. Those candidates are not required to sit for UPTs except for the EPT if they earned their Bachelor degree from French institutions. The total number of transferred credits cannot exceed 50% of the total required credits of the Pre-Pharmacy Program. Furthermore, the required total average to be accepted as a transfer student holding a degree from a Lebanese University should be at least 70%. The same applies to Non-Degree holders; however, those with a Bachelor degree are given priority for admission to the Pre-Pharmacy Program.
- b. The required total average to be accepted as transfer students holding a degree from other non-Lebanese Universities should be at least 80%.
- c. Transferable courses are subject to passing grades shown in below:

d. **Table 2: Courses Transfer Requirements**

System	Transferrable Grade Undergraduate	Transferrable Grade Graduate (PharmD)
Lebanese University	60% and Above	NA
Other Universities	70% and Above	NA

### 6.2 Transfer Criteria from Other LIU Schools

Courses taken in other LIU schools, primarily School of Arts and Sciences (SAS) are transferable. Course transfer criteria adopted by the school of pharmacy is only applicable as follows:

- a. A transfer candidate should be a registered student within the SAS to be eligible for applying to the SOP.
- b. At least 30 credits must be taken from the SAS out of which at least 15 credit as major courses (Biology, Chemistry, Biochemistry ...).
- c. Cumulative GPA for students applying to SOP should be a minimum of 3.2 out of 4.0. As for the major courses to be transferred, the course grade should be C and above, and above 60 for non-major and elective courses.
- d. Applications must be submitted by mid of summer semester to the admission office for approval.

## 7. SCHOOL COMMITTEES

### 7.1 Accreditation Committee

The Accreditation Committee (AC) at the school of pharmacy was established with the ultimate goal of seeking national and international accreditation of the professional pharmacy program it offers. The accreditation committee ensures that the program meets established qualifications and educational standards through initial and periodic evaluations. It serves as a steering function to guide all aspects of the accreditation process and communicates with the accreditation bodies to apply for the accreditation/certification. In addition, it is entrusted to oversee the Self Study Process and coordinate between various committees and departments to achieve accreditation standards required by various accreditation bodies (Lebanese pharmacy programs accreditation agency and ACPE). Furthermore, the AC collaborates with the institutional accreditation steering committee on matters related to institutional accreditation. The AC strives to maintain and foster a culture of continual improvement and accountability across the school at all times.

### 7.2 Assessment Committee

The Assessment Committee of the school of pharmacy was launched in December 2016. It is a standing faculty committee of the school that has the role to formulate, refine, and manage an overall assessment plan for the professional degrees. The committee, in an advisory capacity, is responsible for informing the dean about critical assessment needs, processes, tools, and data sources; define the infrastructure and resources needed to manage assessment and implement preliminary assessment plan.

### 7.3 Curriculum Committee

The Curriculum Committee (CC) functions as a proactive body and is responsible for curricular development, evaluation, and improvement consistent with the curricular outcomes, the mission of the curriculum, and the mission and vision of the school of pharmacy to meet its strategic outcomes as well as accreditation standards. The CC is the central body for the management of orderly (timely) and systematic reviews of curricular structure, course content, process, outcomes and any other curricular concern. The committee is also charged with the responsibility of reviewing and addressing results of curricular assessment of curriculum outcomes. The committee consists of the dean, assistant deans, chairs, one full timer representative, one part timer representative, and a student representative.

### 7.4 Extracurricular Committee

The Extracurricular Committee (EC) is responsible for activities that take place outside regular class teaching. It inculcates additional credit towards career and thereby leading towards holistic development of an individual. It provides both students and faculty with the platform to participate in diverse activities. Most of events are coordinated and organized by the students under close supervision of the committee chair and members.

### 7.5 Grievance Committee

The purpose of the school of pharmacy Grievance Policy is premised on the commitment of LIU to foster and uphold the highest standards of academic integrity, the fundamental values of which are honesty, trust, fairness, respect, responsibility, as well as trustworthiness. All members of LIU including faculty, students, assistants and staff, have a responsibility to adhere to and uphold them in their teaching, learning, evaluation, research and creative activities. The Grievance Committee considers any petition by a student or faculty member who alleges a grievance in any matter and is related to any other student or faculty member.

## 7.6 Research Committee

The Research Committee at the school of pharmacy advises researchers on research strategies, initiatives and innovation that promote the research conductance. It aims to contribute to the advancement of Lebanese research by creative activities achieved through research conductance. It fosters the conduct of research to keep abreast in the new updated patient management. The main ethical principles of the committee are: respect for persons, beneficence, and justice. These principles are established through advice on ethical issues, approval of proposals, and follow-up of research progression.

## 7.7 Student Learning Committee

The Student Learning Committee (SLC) at the school of pharmacy was established to mentor and to aid students with poor academic performance. The committee aims to monitor them for their academic improvements. In addition, the committee provides academic guidance in particular to new students with poor academic performance or under probation. Moreover, the committee works in close coordination with the student's affairs office and the dean's office to facilitate the learning and evaluation process of student with documented physiological disabilities (blindness, deafness and other motor disabilities).

## 8. GRADUATION AND POST-GRADUATION POLICIES AND PROCEDURES

### 8.1 Graduation Requirements - Bachelor of Pharmacy (BPharm)

An undergraduate student can only graduate upon the fulfillment of the program credits requirements with both Major and Cumulative Grades of 70% or higher (MGPA and CGPA  $\geq 2.0$ ). Also major and core courses should have a minimum grade of 70%. Students should also spend at least 12 months of practice in community and hospital pharmacies during their study, 9 months of which are accomplished through the university curriculum.

- a. A minimum of 24 credit hours of General Education (Minimum 13% of total credit hours requirements).
- b. A minimum of 32 credit hours in Core Requirements (Minimum 18% of total credit hours requirements).
- c. A minimum of 123 credit hours in Major Area Requirements (minimum 69% of total credit hours requirements).
- d. A minimum of 179 credit hours in total.

### 8.2 Graduation Requirements - Doctor of Pharmacy (PharmD)

A graduate student can only graduate upon the fulfillment of the program credits requirements, including the Project, with a minimum Cumulative Grade of 80%.

### 8.3 Graduation Honors

Undergraduate members of the graduating class who have attained an outstanding scholastic record may be graduated with University Honors.

To be eligible, a student must have completed at least 60 letter-graded credits at LIU. All degree-related course work completed at the University is calculated in the quality point average. Receipt of University

Honors are based on having obtained the following quality point average at graduation:

$3.20 \leq \text{GPA} \leq 3.49$  Honors

$3.50 \leq \text{GPA} \leq 3.75$  Distinctions

$3.75 \leq \text{GPA} \leq 4.00$  High Distinctions

### 8.4 Postgraduate Licensing Requirements

1. Pharmacy graduates are required to pass the National Competency Assessment Examination (Colloquium).
2. Pharmacy graduates should attain a total of 1 year (365 days) of pharmacy practice by the time of graduation (9 months as part of the curriculum through the pharmacy practice experiences (PPEs) and 3 months during pre-pharmacy years).

## 9. STUDENT SERVICES

### 9.1 Health Services

The university provides preliminary health care, health education, and health counseling. Students have personal medical coverage to help them meet their financial difficulties arising from illness or accidents through the National Social Security Fund. In addition, the university has a group of medical insurance to cover different medical emergencies that occurs on campus.

### 9.2 Financial Support

The university developed a financial support program to all students. This program provides the option of scheduling the tuition into multiple payments.

### 9.3 Student Enrollment in School Committees Procedure

The school of pharmacy has several committees that actively engage students in improving the school's educational system while contributing in achieving the school's mission, vision and strategic planning.

At the beginning of each academic year, students are recruited to participate in the school's committees, including the assessment, curriculum, extracurricular, grievance, research and students learning, where the dean sends the student's application form through email to all pharmacy students in order to join any of the committees. All candidates then will be interviewed by the chairperson of the corresponding committee.

Eligible students must fulfill the following criteria:

1. In good social and academic standing
2. Able to attend and actively participate in all meetings
3. Committed to fulfill the committee's objectives

### 9.4 Tutoring

Tutoring is available for students with academic difficulties or set on probation by volunteers and is organized by the student learning committee.

### 9.5 Email Account

An email account is provided to each student who has registered for at least one semester at the school. The student must activate his/her account and check his/her inbox for announcements, on a regular basis. Email account is an official means of communication for the school.

## 10. CODE OF ETHICS OF PHARMACIST

Pharmacists are health professionals who assist individuals in making the best use of medications. This code, prepared and supported by pharmacists, is intended to state publicly the principles that form the fundamental basis of the roles and responsibilities of pharmacists. These principles, based on moral obligations and virtues, are established to guide pharmacists in relationships with patients, health professionals, and society.

- I. A pharmacist respects the covenantal relationship between the patient and pharmacist. Considering the patient-pharmacist relationship as a covenant means that a pharmacist has moral obligations in response to the gift of trust received from society. In return for this gift, a pharmacist promises to help individuals achieve optimum benefit from their medications, to be committed to their welfare, and to maintain their trust.
- II. A pharmacist promotes the good of every patient in a caring, compassionate, and confidential manner. A pharmacist places concern for the well-being of the patient at the center of professional practice. In doing so, a pharmacist considers needs stated by the patient as well as those defined by health science. A pharmacist is dedicated to protecting the dignity of the patient. With a caring attitude and a compassionate spirit, a pharmacist focuses on serving the patient in a private and confidential manner.
- III. A pharmacist respects the autonomy and dignity of each patient. A pharmacist promotes the right of self-determination and recognizes individual self-worth by encouraging patients to participate in decisions about their health. A pharmacist communicates with patients in terms that are understandable. In all cases, a pharmacist respects personal and cultural differences among patients.
- IV. A pharmacist acts with honesty and integrity in professional relationships. A pharmacist has a duty to tell the truth and to act with conviction of conscience. A pharmacist avoids discriminatory practices, behavior or work conditions that impair professional judgment, and actions that compromise dedication to the best interests of these patients.
- V. A pharmacist maintains professional competence. A pharmacist has a duty to maintain knowledge and abilities as new medications, devices and technologies become available and as health information advances.
- VI. A pharmacist respects the values and abilities of colleagues and other health professionals. When appropriate, a pharmacist asks for the consultation of colleagues or other health professionals or refers the patient. A pharmacist acknowledges that colleagues and other health professions may differ in the beliefs and values they apply to the care of the patient.
- VII. A pharmacist serves individual, community, and societal needs. The primary obligation of a pharmacist is to individual patients. However, the obligations of a pharmacist may at times extend beyond the individual to the community and society. In these situations, the pharmacist recognizes the responsibilities that accompany these obligations and acts accordingly.
- VIII. A pharmacist seeks justice in the distribution of health resources. When health resources are allocated, a pharmacist is fair and equitable, balancing the needs of patients and society.

**Adopted by the membership of the American Pharmaceutical Association, October 27, 1994**



## 11. OATH OF PHARMACIST

I promise to devote myself to a lifetime of service to others through the profession of pharmacy.

In fulfilling this vow:

I will consider the welfare of humanity and relief of suffering my primary concerns.

I will apply my knowledge, experience, and skills to the best of my ability to assure optimal outcomes for my patients.

I will respect and protect all personal and health information entrusted to me.

I will accept the lifelong obligation to improve my professional knowledge and competence.

I will hold myself and my colleagues to the highest principles of our profession's moral, ethical and legal conduct.

I will embrace and advocate changes that improve patient care.

I will utilize my knowledge, skills, experiences, and values to prepare the next generation of pharmacists.

Coordinate with the market place to adapt curricula fitting for pharmaceutical industry as well as the growing patient-oriented sector of pharmacy practice or possible novel fields.

I take these vows voluntarily with the full realization of the responsibility with which I am entrusted by the public.

**Adopted by the AACP**

## 12. CALENDAR

### Lebanese International University

# 2019-2020

## Academic Year Calendar

September 19						
M	Tu	W	Th	F	Sa	Su
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

October 19						
M	Tu	W	Th	F	Sa	Su
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

November 19						
M	Tu	W	Th	F	Sa	Su
				1	2	3
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11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

December 19						
M	Tu	W	Th	F	Sa	Su
						1
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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

January 20						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

February 20						
M	Tu	W	Th	F	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	

March 20						
M	Tu	W	Th	F	Sa	Su
						1
2	3	4	5	6	7	8
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16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

April 20						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

May 20						
M	Tu	W	Th	F	Sa	Su
			1	2	3	
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June 20						
M	Tu	W	Th	F	Sa	Su
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8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

July 20						
M	Tu	W	Th	F	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

August 20						
M	Tu	W	Th	F	Sa	Su
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

September 20						
M	Tu	W	Th	F	Sa	Su
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

October 20						
M	Tu	W	Th	F	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

Fall Semester			Total Effective Teaching Hours		
Number of Mondays	14	Number of Tuesdays	14	MW	42.0 / 42 100 %
Number of Wednesdays	14	Number of Thursdays	14	TTH	42.0 / 42 100 %

Spring Semester			Total Effective Teaching Hours		
Number of Mondays	13	Number of Tuesdays	15	MW	42.0 / 42 100 %
Number of Wednesdays	15	Number of Thursdays	15	TTH	45.0 / 42 107 %

### Notes

#### Fall 2019-2020

September 30: Fall Begins
November 10: Prophet's Holiday
November 22: Independence Day
December 24-01 January: Christmas and New Year Vacation
January 06: Armenian Christmas
January 15: Fall Ends
January 20: Final Exams for Fall Start
February 01: Final Exams for Fall End
February 09: St. Maron's Holiday

#### Spring 2019-2020

February 17: Spring Starts
March 25: Annunciation Holiday
April 10-April 13: Easter Holiday
April 17-April 20: Easter Holiday
May 01: Labor Day
May 24-26: Eid Al-Fitr Holiday
May 25: Liberation Day
June 03: Spring Semester Ends
June 08: Final Exams for Spring Start
June 20: Final Exams for Spring End

#### Summer 2019-2020

June 29: Summer / Extended Summer Starts
July 29: Summer Ends
July 30 - July 31 Eid Al-Adha
August 03: Final Exams for Summer Start
August 08: Final Exams for Summer End
August 15: Assumption Day
August 20: Hijra New Year
August 29: Ashoura Holiday
September 03: Extended Summer Ends
September 07: Final Exams for Extended Summer Start
September 12: Final Exams for Extended Summer End