

COLLEGE OF PHARMACY
2014-2015 Academic Catalog



Rosalind Franklin University of Medicine and Science and the College of Pharmacy reserve the right to change, at any time and without notice, their requirements, regulations, course and program offerings, fees, charges, and other matters addressed in this catalog. Rosalind Franklin University of Medicine and Science must reserve the right to modify or terminate programs described herein. However, modification of program requirements will not adversely affect those students already enrolled in a program, nor will termination of a program affect anything other than the closure of admission thereto.

v. July 31, 2015

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ROSALIND FRANKLIN UNIVERSITY
OF MEDICINE AND SCIENCE
College of Pharmacy

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Dear Prospective and Current Students:

Welcome to the Rosalind Franklin University of Medicine and Science College of Pharmacy! This catalog will provide guidance on the structure of our College and the course offerings available to students. Please use this catalog in conjunction with our website www.rosalindfranklin.edu/collegeofpharmacy and Student Handbook to learn about our academic policies and procedures, educational philosophy, and commitment to student life.

We are proud to be a part of a university dedicated to interprofessional healthcare practice. This team-based approach to patient care is evidenced throughout our 4-year curriculum that interweaves the fundamentals of pharmaceutical sciences with modern-day pharmacy practice, preparing graduating pharmacists to play an integral role in not only the delivery, but also the management of patient therapies.

Sincerely,



Gloria E. Meredith, PhD
Dean

History

For over 100 years Rosalind Franklin University of Medicine and Science has been educating physicians and furthering biomedical research. Beginning in 1912 the Chicago Medical School was created as a medical school and hospital where employed men and women could study medicine at night. Under the direction of John J. Sheinin, MD, PhD, DSc, who served as Dean and President from 1932 to 1966, CMS successfully met the challenges arising from the restructuring of American medical education.

In 1967, the University of Health Sciences was established. It was comprised of the Chicago Medical School, the School of Graduate and Postdoctoral Studies, and the School of Related Health Sciences later renamed the College of Health Professions (CHP). In 1970 a baccalaureate program in Physical Therapy was offered. This Bachelor of Science degree was an upper division (Junior/Senior level) two-year program. In 1972, a baccalaureate degree in Medical Technology was offered. During the 1980's, the College of Health Professions added Master of Science degrees in Physical Therapy and Medical Technology, as well as a Bachelor of Science in Nursing. In the 1990's CHP increased to include Master of Science Programs in Physician Assistant Practice, Nutrition, Pathologists' Assistant, and an entry-level Doctorate in Physical Therapy (DPT) degree. Since that time, the College of Health Professions has expanded to include masters- or doctoral-level programs in the following areas: Biomedical Sciences, Clinical Psychology, Health Administration, Health Professions Education, Interprofessional Healthcare Studies, Nurse Anesthesia, and a transition Doctor of Physical Therapy (tDPT).

In 1980, the University relocated to its current campus in North Chicago, Illinois adjacent to the Captain James A. Lovell Federal Health Center and Naval Station Great Lakes. That same year, the University was granted full accreditation by the North Central Association of Colleges and Schools. The University was one of the first educational institutions in the country devoted to educating men and women for a broad range of professional careers in health care and research.

In 2001, The Dr. William M. Scholl College of Podiatric Medicine, founded in 1912, became part of the University. In 2002, in order to accommodate its growth, the University opened the Health Sciences Building. This state-of-the-art, 140,000 square-foot facility houses the Feet First Museum, laboratories, auditoriums, classrooms, and departmental offices. The University became a residential campus for the first time in its history when three student housing facilities opened in 2003.

On January 27, 2004, the University publicly announced its intent to change its name to Rosalind Franklin University of Medicine and Science, in honor of Rosalind Franklin, PhD, a pioneer in the field of DNA research. The name change became legal on March 1, 2004, at which time the School of Related Health Sciences also changed its name to College of Health Professions. In addition to the name change and the announcement of several new strategic initiatives, the University has been in the midst of profound physical growth.

A University-wide interprofessional committee was established in 2004 and charged with developing the “Interprofessional Model of Care” for the University as well as model educational experiences. The concept for the Interprofessional Healthcare Experience began as an outcome of the University’s strategic plan which emphasized the importance of interprofessional collaborations. As a requirement for graduation, Rosalind Franklin University of Medicine and Science now requires all first year clinical students to complete the Interprofessional Teams and Culture in Health Care course in order to foster interprofessional collaborations between all programs.

The University’s Basic Sciences Building is a 400,000-square-foot facility that houses a 52,000-square-foot Library and The Daniel Solomon, MD, and Mary Ann Solomon Learning Resource Center as well as administrative offices, classrooms, auditoriums, basic science departments, research and teaching laboratories, and dining areas. In 2006 the University opened a two-story, \$10 million research expansion to the Basic Science Building to further its mission of scientific discovery.

In 2010, the University broke ground on the 23,000-square-foot Morningstar Interprofessional Education Center which offers additional classrooms, laboratories, clinical simulation spaces, and an amphitheater. It is the home of the College of Pharmacy, which welcomed its inaugural class in fall 2011.

In 2013, the Rothstein Warden Centennial Learning Center was completed. This 73,000-square-foot, three-level addition to the University’s campus facility features state-of-the-art learning spaces that foster collaboration and enhance interaction between students and faculty. These rooms and their configurations further the University’s commitment to interprofessional education.

In 2014, the DeWitt C. Baldwin Institute for Interprofessional Education was added as well as the Student Welcome Center. Aligned with the University’s central Mission and Vision, the DeWitt C. Baldwin Institute for Interprofessional Education is dedicated to advancing interprofessional education and practices in medical and health professions.

Dr. Rosalind Franklin, through her pioneering work in the science of life and through her unflinching perseverance, serves as a role model for our faculty and students, and represents the future of biomedical science and integrated health care. Her history mirrors our own in many profound ways, marked by dedication to discovery even in the midst of difficult times. Upon that history, her legacy guides the future of the University itself. To learn more about Dr. Rosalind Franklin and the University’s dedication to her legacy, visit www.rosalindfranklin.edu/RosalindFranklin.

After more than 100 years of excellence in healthcare education, Rosalind Franklin University of Medicine and Science has only just begun to write its history. We hope you will join us in creating bold visions for an ambitious future.

Location

The College of Pharmacy is located on the third floor of the Health Science building and the new Interprofessional Education Center. The building is on the campus of Rosalind Franklin University of Medicine and Science, at 3333 Green Bay Road, North Chicago, IL 60064. The University is located in the Chicago-Milwaukee corridor, with access to downtown Chicago, Milwaukee, and their surrounding suburbs by car or public transportation. University students enjoy an environment rich in cultural and leisure activities, with neighboring northern Illinois and southern Wisconsin communities that boast award-winning restaurants, museums, scenic landscapes, and more. For directions and a map, visit www.rosalindfranklin.edu.

Mission and Vision of the College of Pharmacy

Mission

To serve the nation through excellence in pharmacy education, research, and practice, with a commitment to patient-centered interprofessional care, community service, life-long learning, and an ethos of social responsibility.

Vision

To be recognized as a leader in pharmacy education who is dedicated to educating future pharmacists to serve humankind and their communities with competence, compassion, and in an ethical manner.

Core Values

Excellence, integrity, communication, interprofessionalism, scholarship, scientific curiosity, compassion, service, and diversity.

Equal Opportunity

It is the policy of RFUMS not to discriminate on the basis of race, sex, sexual orientation, color, creed, religion, national origin, disability or age in admissions or employment or in any programs or activities. It is the University's intent to comply with applicable statutes and regulations, including Title IX of the 1972 Education Amendments and Section 504 of the Rehabilitation Act of 1973. Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA) of 1990 both prohibit discrimination against individuals with disabilities by mandating a provision of reasonable accommodations to make limitations to what services can be provided. It is the University's goal to assist students in developing their potential in light of what is feasible and reasonable under the law. Refer to the RFUMS Student Handbook for Educational Opportunity Policies and Procedures.

Accreditation

RFUMS receives its degree-granting authority from the Illinois Board of Higher Education and is accredited through the North Central Association of Colleges and Schools.

North Central Association of Colleges and Schools
 Higher Learning Commission
 30 North LaSalle Street, Suite 2400
 (800) 621-7440
 (312) 263-0456

The College of Pharmacy seeks accreditation from the Accreditation Council for Pharmacy Education (ACPE), the sole accreditor of the Doctor of Pharmacy Program.

Accreditation Disclosure Statement

The Accreditation Council for Pharmacy Education (ACPE) accredits Doctor of Pharmacy programs offered by Colleges and Schools of Pharmacy in the United States and selected non-US sites. For a Doctor of Pharmacy program offered by a new College or School of Pharmacy, ACPE accreditation generally involves three steps: Precandidate accreditation status, Candidate accreditation status, and Full accreditation status. Precandidate accreditation status denotes a developmental program that is expected to mature in accord with stated plans and within a defined time period. Precandidate accreditation status is awarded to a new program of a College or School of Pharmacy that has not yet enrolled students in the professional program and authorizes the program to admit its first class. Candidate accreditation status is awarded to a Doctor of Pharmacy program that has students enrolled but has not yet had a graduating class. Full accreditation status is awarded to a program that has met all ACPE standards for accreditation and has graduated its first class. Graduates of a class designated as having Candidate accreditation status have the same rights and privileges of those graduates from a fully accredited program. ACPE conveys its decisions to the various boards of pharmacy and makes recommendations in accord with its decisions. It should be noted, however, that decisions concerning eligibility for licensure by examination or reciprocity reside with the respective state boards of pharmacy in accordance with their state statutes and administrative rules.

The Doctor of Pharmacy program of the Rosalind Franklin University of Medicine and Science College of Pharmacy was awarded Candidate accreditation status during the June 20-24, 2012 meeting of the ACPE Board of Directors based upon an on-site evaluation conducted April 17-19, 2012. The Board of Directors decided during their June 18-22, 2014 meeting that the Candidate accreditation status of the program be continued. This decision was based on the on-site evaluation conducted March 25-26, 2014. If the program continues to develop as planned, full accreditation of the Doctor of Pharmacy program will be considered by the Board in June, 2015 following the graduation of students from the program.

Precandidate Status: Granting of Precandidate accreditation status brings no rights or privileges of accreditation as associated with either candidate status or fully accredited status. Precandidate accreditation status indicates only that planning has taken into account ACPE standards and guidelines and suggests reasonable assurance of moving to the next step, that of Candidate accreditation status. Since Precandidate accreditation status does not create any rights of accreditation under the ACPE standards, it is the opinion of ACPE that graduates of programs of Colleges or Schools of Pharmacy that bear Precandidate accreditation status do not meet the educational requirements for licensure.

Candidate Status: With Candidate accreditation status, graduates of a program so designed would, in the opinion of ACPE, have the same rights and privileges of those graduates from a fully accredited program. The Candidate accreditation status denotes a developmental program that is expected to mature in accord with stated plans within a defined time period. It should be underscored, however, that decisions concerning eligibility for licensure by examination or reciprocity reside with the respective state boards of pharmacy in accordance with their state statutes and administrative rules. Should Candidate accreditation status be awarded to a program, ACPE would, however, make its position known and make recommendations consistent with that position.

Student Comments to ACPE

College of Pharmacy students are encouraged to maintain an open dialogue with their professors, school administrators, and the body from which it seeks accreditation, ACPE. Should a student or prospective student feel that RFUMS and the College of Pharmacy is in violation of the ACPE standards and guidelines, he/she should contact the ACPE directly (see below):

Accreditation Council for Pharmacy Education
135 S. LaSalle Street - Suite 4100
Chicago, IL 60603-4810
Phone: [312-664-3575](tel:312-664-3575)
Fax: [312-664-4652](tel:312-664-4652)
csinfo@acpe-accredit.org

Further information about the ACPE complaint process can be found at <http://www.acpe-accredit.org/students/complaints.asp>.

Admissions Policy

College of Pharmacy applicants will be evaluated not only for their educational potential, but also with the aim of providing a diverse educational experience for other members of the class. The diversity that is sought in the student body includes gender, geographical, racial or national origin, cultural identity, foreign language skills, life experiences, and other unique abilities and qualities. It is the goal of the College of Pharmacy admissions policy to ensure a fair selection process that results in the matriculation of students who will be dedicated to the philosophy and practice of patient-centered care. The College recognizes that a selection process that fulfills this goal must extend beyond the consideration of formal education to include the cultural diversity of the applicant pool.

Rosalind Franklin University does not and will not provide any commission, bonus, or other incentive payment based directly or indirectly on success in securing enrollment or financial aid to any persons or entities engaged in any student recruiting or admissions activities or in making decisions regarding the award of student financial assistance.

Background Check Policy

Acceptance to the College of Pharmacy is conditional pending results of a criminal background check. The background check facilitated through the PharmCAS system will be utilized for pharmacy applicants. In addition, enrolled students are required to complete a background check prior to the start of each professional year. The checks are required by the College as per agreements with experiential education rotation practice sites (see COP Student Handbook). The following details the University policy on background checks and applies to all College of Pharmacy students.

University Background Check Policy

This policy shall apply to all applicants accepted for admission to any academic program at Rosalind Franklin University of Medicine and Science that requires a Criminal Background Check for matriculation. Departments are responsible for determining if a Criminal Background Check is a requirement based on departmental policies, accreditation requirements, or the requirements of an outside governing body (such as a professional organization).

University Background Check Policy Statements

- A. Individuals to whom this policy applies will be required to have a criminal background check performed with results deemed favorable by the University as a condition of their full **matriculation**. An offer of admission will not be final and full **matriculation** not permitted until the completion of the background check with results deemed favorable by the University. An offer of admission may be denied or rescinded based upon the results of the criminal background check.
- B. Background checks include:
 - (1) Social Security Number Validation and Verification
 - (2) County Criminal Records Search (past 7 years)
 - (3) National Criminal Records Database Search (past 7 years)

- (4) National Sex Offender Database Search (past 7 years)
 - (5) Federal Criminal Records Search (past 7 years)
- C. An accepted applicant for whom no criminal background check results have been received will be **provisionally matriculated**. A **provisionally matriculated** student may attend classes and receive financial aid funds. Students who have not submitted their criminal background check information to the University and the appropriate private vendor due to a **late acceptance** (defined as acceptance offered two weeks prior to the start of class or later) will be allowed to remain in the provisionally matriculated status for up to 30 calendar days after the start of class. After 30 days, if the student has not yet submitted the required information he or she will be deemed to have refused to fulfill this requirement and will be dismissed. If a **finding** is discovered, the provisionally matriculated status may be extended at the discretion of the CBC Review Committee, not to exceed one quarter.
- D. Individuals to whom this policy applies must authorize the University to have a criminal background check performed. A **Criminal Background Check Disclosure & Authorization** form may be required.
- E. Cost of the Criminal Background Check will be the responsibility of the applicant; however the department may choose to offset these costs.
- F. If the student does not submit the required Criminal Background Check information by thirty days past the program start date, this will be considered a refusal to participate and may result in denial or rescission of admission, disciplinary action or dismissal.
- G. Omission of required information or material, or false or misleading information provided by the individual on the **Criminal Background Check Disclosure & Authorization** or in any other communication with the University or Criminal Background Check vendor may result in denial or rescission of admission, disciplinary action, or dismissal.
- H. The University will not consider criminal background check reports that were originally performed for educational or employment purposes at another institution or agency in lieu of checks performed at the request of RFUMS.
- I. The University will receive the results of the criminal background check. Results will be reviewed and maintained only by members of the **Criminal Background Check Review Committee**.
- J. If the background check report reveals a **finding**, the University:
- a. will provide the **provisionally matriculated** student with a copy of the report and the document "A Summary of Your Rights Under the Fair Credit Reporting Act" and request the individual to provide a detailed written description and explanation of the information contained in the report along with appropriate documentation. This information must be returned to the University within 10 working days of the date the communication is sent to the individual, or another date specified by the University in its communication

- with the individual. The University may also independently seek to obtain additional information, such as a copy of the original criminal charge.
- b. will advise the student of the name and address of the consumer reporting agency that furnished the report, and of the right to dispute the accuracy or completeness of any information contained in the report by contacting the consumer reporting agency directly.
 - c. will determine, on a case-by-case basis, the timeframe in which a student will be allowed to remain in a **provisionally matriculated** status. In no case may a student with a **finding** be in a **provisionally matriculated** status for more than one academic quarter.
- K. The University, as represented by the **Criminal Background Check Review Committee**, will review the report, the **provisionally matriculated** student's explanation and any supplementary information. The **CBC Review Committee** will make a determination on the **findings** on a case-by-case basis and will consider factors such as:
- (1) the nature and seriousness of the offense,
 - (2) the circumstances under which the offense occurred,
 - (3) relationship between the duties to be performed as part of the educational program and the offense committed,
 - (4) the age of the person when the offense was committed, whether the offense was an isolated or repeated incident,
 - (5) the length of time that has passed since the offense,
 - (6) past employment and history of academic or disciplinary misconduct,
 - (7) evidence of successful rehabilitation,
 - (8) the accuracy of the information provided by the accepted applicant in the application materials,
 - (9) Disclosure Form or other materials,
 - (10) and any other factor it deems relevant.
- L. If the CBC Review Committee deems the background check information unfavorable, or if the information received indicates that the accepted applicant may be unable to meet the requirements for completion of the program, an offer of admission may be rescinded and the student will not be allowed to fully matriculate. Unresolved criminal charges in the background check or failure by the individual to provide additional documentation as required may necessitate postponement of the University's final decision pending the outcome of the matter.
- M. If a **provisionally matriculated** student's admission offer is rescinded, a student may appeal the admission decision based on the report within 10 days. Appeals must be put in writing. At the discretion of the CBC Review Committee, a student may be asked to provide additional information before making a final decision. A final response to written appeals will be made by the CBC Review Committee within 30 days of receiving the appeal. Federal Financial Aid Funds will be subject to the **Title IV Refund Policy** and tuition will be refunded in accordance with the **Tuition Refund Policy**

- N. If the University decides the Criminal Background Check results are favorable, the student status will change from **provisionally matriculated** to **matriculated**. The Registrar’s Office will be notified of the change in status in writing from a representative of the CBC Review Committee.
- O. Matriculation is not a guarantee that every clinical facility will permit the student to participate in its portion of the RFUMS educational program in the future, or that any state will accept the individual as a candidate for registration, permit, or licensure.
- P. Criminal background check reports will be maintained securely, confidentially, and separately from an admission file or a student’s academic file. Criminal background check reports must be maintained for a period of at least five years after graduation or separation from the University for enrolled students, and for at least five years after the last activity involving applicants. Access to criminal background check information will be governed by the Family Educational Rights and Privacy Act (FERPA).

DEFINITIONS

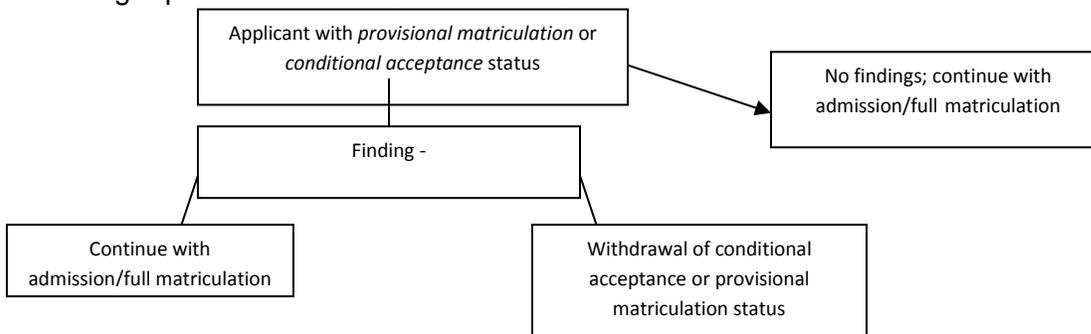
Provisional Matriculation: Accepted applicant is allowed to enroll in courses, receive financial aid, and has the same rights and responsibilities as all students at RFUMS. A student with a provisional matriculation status, however, may still have the offer of admission rescinded if specific requirement for matriculation is not met (i.e., passing the criminal background check).

Matriculation: A student is fully matriculated and has passed all technical standards required for admission.

Accepted Applicant: The applicant has been offered a place in the entering class but has not yet matriculated.

Criminal Background Check Review Committee: Committee members review disclosure statements and criminal background check results. Associate Vice President of Student Affairs and Enrollment Services appoints committee members. The committee should be supported by the RFUMS legal counsel and include at least one school official who is charged with responsibility for minority, multicultural, or diversity affairs.

The following represents the workflow of the CBC Review Committee:



Criminal Background Check: Research done on an individual’s background which involve, as relevant data are accessible and to the extent permitted by law:

- Conviction information for all criminal offenses (felonies, misdemeanors) committed as an adult
- All types of adjudications
- All legal processes not yet resolved (e.g., an arrest record for offense pending court disposition, an unresolved bench warrant, a failure to appear in court.)

Finding: Criminal background check findings or self-disclosed felonies and misdemeanors. Examples include DUI, Burglary, Shoplifting, Traffic Offenses, etc.

Late Acceptance: Defined as acceptance offered two weeks prior to the start of class or later.

REFERENCES AND RELATED POLICIES

- Title IV Refund Policy (Financial Aid Office Policy *and* Federal Policy 34 CRF 668.22)
- Tuition Refund Policy (Business Office)
- Federal Student Financial Aid Eligibility 34 CRF 668.32
- Fair Credit Reporting Act (FCRA 15 U.S.C. 1681)
- Family Educational Rights and Privacy Act (FERPA).
- The State of Illinois Medical School Matriculant Criminal History Records Check Act (Public Act 094-0709)
- AAMC Group on Student Affairs Committee on Admissions Informational *Guide to Effective Practices for Criminal Background Checks*

Drug Testing

The College of Pharmacy must certify that students are negative for certain drugs prior to placement at experiential education rotation practice sites. As such, students are required to complete a drug test prior to the start of each professional year. The cost of the drug screen is the responsibility of the student. Students may be asked to share drug screen results with rotation sites upon request, and certain experiential sites may request a random drug screen during a student's rotation (see drug screening process in the Experiential Education Manual for additional details).

What Admissions Committees Look for in a Successful Applicant

Every successful applicant is expected to embody the following set of core attributes:

Intellectual Capacity

Evidence that the applicant can meet the scholastic requirements of the College of Pharmacy on the basis of past academic performance must be provided. This is assessed using the undergraduate grade point average the combined undergraduate science grade point average, and standardized test scores. Other factors in this category include the quality of the undergraduate institution, the difficulty of the course load, and the trend of grades. A strong aptitude for abstract thought and conceptualization is considered a positive attribute.

Dedication to Healthcare, Science, and Service

Motivation to make a lifetime commitment to the practice of pharmacy can include documented interest in pharmacy, knowledge of current healthcare problems and issues, pharmacy-

healthcare- or service-related employment, or participation in community and school service activities.

Communication Skills

Strong oral and written communication skills are essential attributes for a successful applicant. These skills are provided in the written application and the testimony of references and, in particular, as demonstrated during the interview process.

Integrity

Commitment to the highest standards of ethical and professional behavior must be demonstrated. All applicants are expected to have knowledge of basic ethical principles and to have demonstrated adherence to ethical principles in their past experiences and in the application process.

Many applicants will have past experiences, knowledge, and characteristics that can contribute to both the educational experience of their classmates and to the practice of pharmacy. The following six attributes create a diverse student population that enhances the educational experience of the class, and in turn provides for quality patient care in the future:

Geographic Diversity

An appropriate mix of students from the local area, the nation, and from other countries will be sought. The mix will include those who indicate a desire to serve in populations of the underserved, such as inner city residents, the financially disadvantaged, minority populations, or the uninsured.

Race and Ethnicity

Students from groups underrepresented in healthcare and science will provide opportunities for all students to benefit from interactions with peers with diverse experiences, personal characteristics, and backgrounds.

Life Experiences

A career in pharmacy requires interaction with a diverse population of patients and professionals. As such, we seek students with a wide variety of racial, ethnic, and cultural backgrounds. Experiences with other ethnicities and cultures are considered valuable, such as study abroad, involvement with multicultural organizations, or other unique life experiences.

Teamwork

Applicants with demonstrated ability to work well with others towards a common goal or purpose provide the potential to contribute to the educational experience of classmates and to future collaborations with other healthcare professionals and patients. Demonstration of teamwork may include participation and engagement in student organizations, service organizations, or sports teams, among others.

Educational Background

Applicants with degree majors outside of the sciences may contribute to the educational experience of the class and help future interaction with individuals of diverse backgrounds. Knowledge of a second language, particularly Spanish, is considered a valuable attribute for the future practice of pharmacy. Finally, applicants who possess graduate degrees, such as J.D., Masters in Public Health, Ph.D. etc., have additional skills and experiences that will be valuable both to classmates and to future colleagues.

Leadership

Strong leaders can contribute to their community of classmates, the University, and the surrounding area. Previous leadership experience as documented in the application and supporting documents will be considered in assessing leadership.

Research Experience

A meaningful research experience can provide an additional perspective to pharmacy practice and provide analytical tools for possible future research activities. The above is not intended to be an exhaustive list of the many attributes, factors, and conditions that are considered in the admissions process. Every applicant is evaluated individually.

Application for Admission

Application forms and materials are available online via the Pharmacy College Application Service (PharmCAS) at www.pharmcas.org. All applicants will be asked to review and electronically sign the PharmCAS Applicant's Code of Conduct prior to applying. Individuals unwilling to commit to the Applicants Code of Conduct will be unable to apply to the Rosalind Franklin University College of Pharmacy. Questions about the PharmCAS application system and code of conduct should be addressed to: PharmCAS, Phone: 617-612-2050, info@pharmcas.org.

Inquiries regarding College of Pharmacy admissions should be addressed to:

Rosalind Franklin University of Medicine and Science Office of Admissions
3333 Green Bay Road
North Chicago, IL 60064
Phone: 847-578- 3204

The following are needed to complete an application (see www.pharmcas.org for further details):

- Completed application form and official transcripts from all colleges or universities previously or currently attended. Pharmacy College Admission Test (PCAT) scores must be submitted through PharmCAS
- Two letters of recommendation from persons involved in the student's previous educational or work experience
- A personal interview
- Official transcripts of the Test of English as a Foreign Language (TOEFL) if the applicant's native language is not English and he or she has not attended an American college or university full-time or for two consecutive years

The Admissions Office reviews all applications for completeness and forwards the completed application to the College of Pharmacy for further action. The applicant will be notified by mail whether he or she has been accepted or rejected. The student is required to return his or her letter of acceptance and the placement fee made payable to "Rosalind Franklin University." An orientation packet will be mailed to the student. This packet includes relevant materials, e.g., information and time for registration, orientation, and housing information.

Technical Standards

The Americans with Disabilities Act

The Americans with Disabilities Act (ADA), enacted in July of 1990, protects any individual with a physical or mental impairment that substantially limits that person in some major life activity and any individual who has a history of, or is regarded as having, such an impairment. Under the ADA, as with Section 504 of the Vocational Rehabilitation Act, universities and colleges are prohibited from discriminating against an otherwise qualified person with a disability in all aspects of academic life. Schools must make reasonable accommodations for the known physical or mental disabilities of otherwise qualified individuals. The University need not make an accommodation that would cause an undue burden. The philosophical basis of the ADA, that judging persons on their abilities and achievements rather than their potential disabilities, runs parallel to the traditional philosophy of this University.

In order to define the "essential requirements" of its curriculum, the College of Pharmacy has developed a list of Technical Standards of behavior for the undifferentiated pharmacist. In decisions on admission, evaluation, promotion, and graduation of any person, and especially an applicant or student with a disability, it is the obligation of the student to meet these minimum technical standards, with or without reasonable accommodation.

For further information on these Technical Standards and the procedures for their implementation, interested persons are encouraged to contact Steve Weiland, ADA Coordinator at (847) 578-8349 or steven.weiland@rosalindfranklin.edu.

A candidate for the PharmD degree must possess abilities and skills which include those that are observational, communicational, motor, intellectual-conceptual (integrative and quantitative), and behavioral and social. The use of a trained intermediary is not acceptable in many clinical situations in that it implies that a candidate's judgment must be mediated by someone else's power of selection and observation.

Observation

The candidate must be able to acquire a defined level of required information as presented through demonstrations and experiences in the basic and clinical sciences, including, but not limited to, information conveyed through physiologic and pharmacological images and demonstrations. Furthermore, a candidate must be able to:

- observe a patient accurately, at a distance, and close at hand, with or without standard medical instrumentation, to acquire information from written documents, and to visualize information as presented in images from paper, films, slides or video.
- interpret graphic images, and digital or analog representations of physiologic phenomenon with or without the use of assistive devices.

Such observation and information acquisition necessitates the functional use of visual, auditory, and somatic sensation while being enhanced by the functional use of other sensory modalities. In any case where a candidate's ability to observe or acquire information through these sensory

modalities is compromised, the candidate must demonstrate alternate means and/or abilities to acquire and demonstrate the essential information conveyed in this fashion. If the alternatives are acceptable, it is expected that obtaining and using such alternate means and/or abilities shall be the responsibility of the student. Costs of necessary accommodations should be reasonable and will be properly borne by the University when not the responsibility of the student or otherwise funded.

Communication

A candidate must be able to speak, to hear, and to observe patients by sight in order to elicit information, describe changes in mood, activity and posture, and perceive nonverbal communications. A candidate must be able to communicate effectively and sensitively with patients and their families. Communication includes speech and writing. The candidate must be able to communicate effectively and efficiently in oral and written form with all members of the health care team.

Motor

It is required that a candidate possess the motor skills necessary to perform basic physical assessment procedures, medication administration, medication preparation, and to utilize laboratory and diagnostic equipment. Such actions require coordination of both gross and fine muscular movements, equilibrium, and functional use of the senses of touch and vision.

Intellectual-Conceptual (Integrative and Quantitative) Abilities

The candidate must be able to measure, calculate, reason, analyze, integrate and synthesize. In addition, the candidate must be able to comprehend three-dimensional relationships and to understand the spatial relationships of structures. Problem solving, the critical skill demanded of pharmacists, requires all of these intellectual abilities. The candidate must be able to perform these problem-solving skills in a timely fashion.

Behavioral and Social Attributes

The candidate must possess the emotional health required for full utilization of his/her intellectual abilities, the exercise of good judgment, the prompt completion of all responsibilities attendant to the care of patients, and the development of mature, sensitive, and effective relationships with patients. The candidate must be able to function effectively under stress. He/she must be able to adapt to changing environments, to display flexibility, and to learn to function in the face of uncertainties inherent in the clinical problems of patients. Compassion, integrity, concern for others, interpersonal skills, interest and motivation are all personal qualities that will be assessed during the admissions and educational process.

Technical Standards can also be found online at www.rosalindfranklin.edu on the Admissions Office website.

Minimum Requirements for Admission

To be considered for admission as student, the applicant should:

- Complete the 60-semester or 87-quarter required prerequisite credits from an accredited college or university.
- Present PCAT scores. The oldest acceptable scores will be 4 years or less prior to the date of possible matriculation (e.g., students applying for August 2012 matriculation would submit scores from 2008 or more recently).
- The TOEFL and TWE are required if you are a foreign applicant who is from a country where English is not the primary language and have not attended a United States university/college for two consecutive years.

Conditional Acceptance

Acceptance may be proffered based on conditions including items such as verification of materials, successful completion of external coursework or exams, or program performance benchmarks in the program to which the person has been accepted. For example, on an individual basis, applicants with remaining prerequisite coursework may apply and their acceptance would be conditional on successful completion of that coursework. In all cases, the conditions and deadline for meeting the conditions will be clearly articulated in the acceptance letter for the program.

Non-Immigrant International Students

The College of Pharmacy is authorized under federal law to enroll non-immigrant international students. For questions regarding immigration matters, please contact the Office of Multicultural Student Services at:

Rosalind Franklin University of Medicine and Science
3333 Green Bay Road
North Chicago, IL, 60064
Phone: 847-578-8354

Tuition, Fees, and Costs

The deposit fee to hold a place in class is applied to the first quarter tuition at registration.

Tuition and fees are due the first day of each term according to the University academic calendar, regardless of when classes actually start. Beginning on the first day of each quarter, a penalty fee of 7% and an interest fee calculated on a daily basis at the rate of 18% per annum is assessed to each student's account which is not yet paid.

Failure to pay tuition and fees in full by the end of the academic quarter will result in a student not being allowed to register for the subsequent quarter.

2014-2015 Tuition and Fees*	
Tuition	\$32,414
Fees (Lab, Technology, Student Services, and Student Council)	\$625

*Subject to change

For additional information about the student budget, please visit the financial aid website.

Refunds

If a student withdraws from a program before the end of the first week of classes, 100% refund of tuition is made. When withdrawal is made before the end of the second week, the refund is 75%; before the end of the third week, 50%; before the end of the 4th week, 25%. After that time, no refund is granted.

Financial Aid Information

Individuals who wish to apply for financial aid should ensure that their graduate program applications are submitted well before the enrollment deadline to allow adequate time for document processing. Students must enroll in 6 hours per quarter to be eligible for financial aid. Applications for federal student aid are available online at: www.fafsa.ed.gov and are available every February for the following academic year. The code for Rosalind Franklin University of Medicine and Science is 001659.

To meet the cost of attending the College of Pharmacy, students, spouse, and/or parents are expected to provide financial support to the extent they are able. When family resources are insufficient to meet college costs, students are encouraged to seek assistance from the following currently existing programs. Financial assistance may be available in the form of student loans including but not limited to Subsidized Federal Stafford Loans, Unsubsidized Federal Stafford Loan, Federal Perkins Loan, and Veteran Education Benefits. Please contact Student Financial Services at 847-578-3217 or visit the financial aid website for further information.

Academic Standards of Performance and Their Measurement

Academic Standards

The College of Pharmacy expects students to pursue studies in a manner that will prepare them for excellence. The College may set standards for promotion. The College will notify students not meeting such standards.

Non-Academic Performance Standards

Students in the College of Pharmacy are subject to dismissal for unethical and/or unprofessional behavior in their student role. Please refer to the College of Pharmacy's Guidelines and Procedures for Student Progression, Evaluation, Assessment, and Recognition for details.

General Grading System

The University system for grading is as follows:

A	4.00	High Achievement
B	3.00	Above-Average Achievement
C	2.00	Average Achievement
F	0.00	Failure

Grades without associated grade points:

P	Pass
F	Fail

Other status notations:

H	Honors
W	Withdrawal
PP	Pass Proficiency Exam
I	Incomplete
#	Graded at Sequence End
IP	In Progress
NC	No Credit Given
AU	Audit

Definitions

Failure (F): Denotes that a student does not demonstrate competency or does not complete the course or clerkship requirements at a satisfactory level as outlined in the syllabus.

Honors (H): Denotes select Podiatry courses and Medical extramural courses in which a student has been given the distinction of honors.

Withdrawal (W): The formal termination of course registration for a quarter

Pass Proficiency Exam (PP): Denotes that student has successfully passed a proficiency exam for a specific course and is reported to the Registrar's office.

Incomplete (I): A temporary notation that a grade cannot be determined because the student has been unable to complete part of the course due to extenuating circumstances. See complete definition included in this policy.

In Progress (IP): Assigned for a course that is currently in progress.

No Credit given (NC): No credit is recorded.

Audit (AU): Enrollment for a course whereby the student does not earn academic credit. Written permission of the appropriate department chair and/or dean is required. Tuition and fees are applicable.

Grade Point Average (GPA)

Only courses graded on an A-F basis are used in calculating GPA. Courses taken as Pass/Fail, Pass by Proficiency, and Audit, are not included. The GPA calculation never includes transfer work from other colleges or universities.

To calculate GPA for one term:

1. Multiply the point value of the letter grade by the number of credit hours. The result is the grade points (quality points) earned.
2. Total the credit hours for the term.
3. Divide the total quality points by the total credit hours. The result is the GPA for the term.

To calculate cumulative GPA:

1. Multiply the point value of the letter grade by the number of credit hours. The result is the grade points (quality points) earned for all terms.
2. Total the credit hours from all terms.
3. Divide the total quality points for all terms by the total credit hours for all terms. The result is the cumulative GPA.

In the case of repeated courses, only the repeated course grade is included in the cumulative grade point average.

Units of Credit

Academic work at RFUMS is measured by units of credit. RFUMS uses the quarter system to measure the length of a term. The quarter system is generally 10-12 weeks of class including final examinations. In conjunction with the letter grade a student receives from the course instructor, units of credit give a fairly accurate evaluation of the amount of time that has been devoted to a given subject.

The number of credit hours assigned to a course is an approximation based on average student workload, entailing lecture, laboratory work and clinical/internship work. All classes offered for credit at RFUMS are equated as a standard credit hour. One credit hour is equivalent to one hour (50 minutes) of lecture per week or two hours per week for laboratory, clinical experience, or small group discussion. Courses may last for one or more quarters. Grades are reported at the end of each course.

Course Numbering System

- 400 Upper-level undergraduate courses
- 500 Graduate/Professional level courses 1st year
- 600 Graduate/Professional level courses 2nd year
- 700 Graduate/Professional level courses 3rd year
- 800 Graduate/Professional level courses 4th year
- 900 Independent Study
- 999 Continuous Enrollment

Submission of Grades

All final grades must be completed and submitted to the Registrar's Office using Web Advisor on or before the grading deadline. Final grades are due no later than 14 days after the end of the quarter. It is critical that this deadline is met. Late submission of grades results in restrictive academic actions on students that can have a myriad of negative impacts (e.g., financial aid, graduation, verifications, etc). Students will have access to their grades via Web Advisor approximately 4 days after submission.

Final grades for students who are eligible for graduation must be submitted one week prior to the date of graduation. The Registrar's Office understands the challenges sometimes associated with receiving grades within 14 days for clinical rotations. Faculty and staff should make all efforts to meet the deadline for submission of grades.

Change of Grades

A. Once grades have been submitted to the Registrar's Office, final grades may be changed for the following reasons:

- Calculating error in computing the grade
- Posting the wrong grade
- Replacing an "I" notation
- Posting a grade if no grade was submitted
- Re-evaluation of the previous grade
- Submission of a new grade after a remediation exam/project is satisfied

When corrections need to be made, an official Grade Change Memo must be sent directly to the Registrar's Office. A previous grade cannot be changed to a "W" (official withdrawal). If the student had a nonacademic emergency, he/she should file a petition for withdrawal with the Registrar's Office.

B. Changes to previously recorded grades must be submitted within one calendar year following the end of the term during which the student was registered for the course. Changes must be initiated by the instructor on a Grade Change Memo, signed by the instructor and the department chair, and then submitted to the Registrar's Office for review. A reason for the requested change must be provided before the request will be reviewed.

After one year or when the student graduates grades are considered final. Any requests for a change of grade after the one year will require documentation describing the change, and why the Grade Change Form was not filed during the appropriate period.

C. Grades will not be changed following a student's receipt of a degree or permanent departure from RFUMS.

Incomplete "I" Policy

Incomplete "I" is not a grade, but a notation that a grade cannot be determined because the student has been unable to complete part of the course due to extenuating circumstances. Extenuating circumstances must be documented and reviewed by the Course/Clerkship Director and/or the Department Chair. This notation is not to be used to denote unsatisfactory performance.

A notation of "I" will be replaced by a grade when a student has made up the missing material and/or taken necessary examination(s) as approved by the department.

Incomplete "I" may be given only in the following circumstances:

- The student's work to date is passing
- Extenuating circumstance which legitimately prevents completion of required work (appropriate documentation is required)
- Required work may reasonably be completed in an agreed-upon time frame (typically by the end of the next quarter, but not to exceed one calendar year)
- The incomplete is not given as a substitute for a failing grade
- The incomplete is not based solely on a student's failure to complete work or as a means of raising his or her grade by doing additional work after the grade report time
- The student initiates the request for an incomplete grade before the end of the academic term

The following provisions for Incomplete "I" apply:

- It is the responsibility of the Instructor to establish the terms of the Incomplete. The Registrar will follow-up on the status of Incompletes on a quarterly basis. Instructors are required to submit a memo to the Registrar detailing the terms of the Incomplete when the Incomplete is assigned
- A final grade to replace the Incomplete must be submitted within one calendar year from the date the Incomplete was recorded. The course work may be completed while the student is not enrolled
- Incomplete will appear on the transcript for one year, or until a final grade is submitted to replace it. Incomplete does not calculate into the grade point average. After one year, or at the time of graduation, an Incomplete will change to 'F' (The F will affect the GPA).
- An Incomplete may not be considered passing for purposes of determining academic standing, federal financial aid eligibility, or other purposes
- An Incomplete should not be assigned when it is necessary for the student to attend additional class meetings to complete the course requirements. Students who receive an incomplete in a course cannot register for a future offering of the course to remove the "I" designation.
- An Incomplete is not to be assigned when the normal practice requires extension of course requirements beyond the end of a term (i.e. thesis).

A failing grade and last date of attendance should be recorded for students who cease attending class without authorization. Students who are unable to complete a course and who do not meet these circumstances should consider withdrawing from the course.

Auditing Courses

A student may elect to audit a course upon approval of the Office of Academic Affairs. The name of an auditing student appears on the class roster. Tuition is charged for an audited course. Audited courses will appear in the student's official record. No credit will be received for the audited courses and the course cannot be used to determine enrollment status or federal financial aid eligibility.

Repeated Courses

The term “repeat” is used when a student retakes an entire course (course retake) after failing the course the first time. The second attempt will have its own entry on the transcript along with the second grade.

If a student repeats a course, the course will be counted toward the degree. The student's official transcript will record all courses attempted, including repeated courses. In the case of repeated courses, only the repeated course grade is included in the cumulative grade point average.

Proficiency Exam

Under certain prescribed conditions, *currently registered* students *in good standing* may receive course credit by taking an examination without formally enrolling in a course. Students may obtain a petition and a copy of the prescribed conditions from the Registrar's Office. The petition is subject to the approval of the school, college or department responsible.

The credit received for the examination may not duplicate any credit already earned toward the degree. Students may not use credit by examination to repeat any course taken previously, regardless of the grade received in that course. The final results will be reported to the Registrar's Office, which will assign the appropriate grade. The student's transcript will reflect “PP” Pass by Proficiency, which is not calculated in the GPA.

Concerns about Grades or Other Academic Assessments

The awarding of grades and all other academic evaluations rests entirely with the faculty. If a student has a concern relating to a particular grade or other assessment of his or her academic work, the student first should speak with the instructor of the class to understand how the grade or other evaluation was derived and to address the student's specific concern. Per the College of Pharmacy's Guidelines and Procedures for Student Progression, Evaluation, Assessment, and Recognition, appeals of course grades or evaluation reports should occur as follows:

1. A student may appeal his/her grade/evaluation report to the Course Director within 2 business days of being posted. The Course Director will have one week to review it and render a decision. If the Course Director supports the appeal and submits a new grade/report, it will replace the grade/report currently in the student's record.
2. If the Course Director rejects the appeal, the student may appeal to the Department Chairperson, who will have one week to review it and render a decision. If the Department Chairperson supports the appeal and submits a new grade/report, it will replace the grade/report currently in the student's record.
3. Continued disagreement will be referred to SPEAC via the COP Offices for Academic and/or for Student Affairs. SPEAC will review the appeal request at its next scheduled meeting. SPEAC's decision on the appeal will be final, with no further recourse for appeal.

Please consult the “Procedures for Questions and Concerns” in the College of Pharmacy Student Handbook for greater detail.

Transfer Credit

Graduate credit earned prior to admission to RFUMS may be eligible to be transferred into certain programs and applied towards degree requirements. Transfer of credit requires the approval of the program chair and dean of the college, and the Registrar’s Office by completing the Transfer Credit Request Form. They will determine whether the credit is eligible for transfer and applicable to the specific certificate or degree program. Credits accepted for transfer do not compute into any RFUMS GPA.

Credit is considered for transfer at the student’s request at the time of initial registration as a degree-seeking student. Students must submit official transcripts. Credit transfer requests from students who are admitted provisionally are not considered until they have fulfilled the conditions of their admission and have had the provisional qualifier removed from their records.

To be eligible for transfer credit, the credit must be graduate credit earned at another U.S. accredited university. The credit must have been earned within five years prior to first enrollment as an admitted student in the specific certificate or degree program, and a minimum grade of B (3.00) must have been earned. The course must be applicable toward a degree at the institution offering the course. The credits cannot have been previously applied toward a degree at another institution or RFUMS; however, up to 3 credits previously applied to a degree program at another institution may be transferred into certain programs at RFUMS.

Credit from Other Institutions

Approval must be received in writing from the department chair and the Office of Academic Affairs, and submitted to the Registrar’s Office before registering at another institution. Upon completion of the course, students must arrange for an official transcript to be submitted to RFUMS so that the credits may be transferred to their RFUMS degree program. Credits are subject to all the other conditions given above for transfer credit, including limits on numbers of credits that can be taken elsewhere. Note that credits accepted for transfer do not compute into the RFUMS GPA. Permission to take a course elsewhere does not exempt a student from satisfying RFUMS degree requirements.

Advanced Standing

Advanced standing may be granted to students who provide evidence of equivalent credit courses completed in other programs at RFUMS or at another accredited university. Advanced standing can take two forms:

Exemption: Students exempted from a course do not have to take that course. However, they must replace their course with another one in order to complete their program. The program advisor will approve course substitutions.

Credit: Students given credit for a course do not have to take nor replace that course with another one in order to complete their program

Students should request advanced standing through the Office of Admissions at the time of admission. Evaluation requests received after the time of admission will not be considered before course registration and will be delayed until the following session.

Students who have been granted exemptions and/or credits are not permitted to register for the course for which they have been granted exemption and/or credits.

Extramural Courses

Extramural courses are taken outside the University after matriculation at RFUMS, and will only be accepted for credit under one of the following circumstances:

- The extramural course is an approved elective (must complete the Request for Outside Elective form)
- The extramural course has been approved for retake of a course failure

Schedule Changes (Adding/Dropping a Course)

A schedule change is defined as adding and/or dropping courses but maintaining enrollment. Not all programs allow students to alter the schedule and/or drop courses; please consult your program for availability. Students may change their class schedule through the Registrar's Office through the first week of the quarter. Starting the second week of the quarter the student must receive approval from the Office of Academic Affairs.

If a student withdraws from a course during the first week of the quarter, there will be no course or grade recorded on the transcript. A student withdrawing from a course after the first week receives a "W" for the course in which the student was enrolled. A student may withdraw from a course up to the tenth week of the quarter; however, a student may not withdraw from a course during the two weeks prior to the final examination or final project. Withdrawing after the tenth week or during the two weeks prior to the final examination will receive regular grade designations as determined by the instructor(s). Under unusual circumstances, a "W" can be assigned in the aforementioned situation if approved by the instructor and the chair of the program, and with final approval of the dean of the school or college.

All students who register for a course and neither complete the course objectives nor officially withdraw according to any one of the procedures described in this document will be graded "F" in that course and must assume all financial obligations associated with the course.

Tuition and fees after dropping one or more courses vary depending the Academic Program and/or College. Please consult with your College for any Refund Policy for Schedule Changes. Please consult the RFUMS Refund Policy for students who withdraw from a program.

Withdrawal

Withdrawal from RFUMS may be for personal reasons on the part of the student, academic reasons as determined by the program requirements, or by administrative decision. The Schedule Change policy (see policy in this document) applies to a student who withdraws.

- Voluntary Withdrawal: To withdraw from RFUMS, the student must submit an official Withdrawal Form to the Registrar's Office and complete an exit interview with his or her advisor.
- Academic Withdrawal: If a student has not made satisfactory academic progress toward fulfilling degree requirements, he or she may be withdrawn from RFUMS.
- Administrative Withdrawal: A student may be withdrawn from a particular program for reasons of a professional nature as determined by the program director, department chair, or dean.

International students who withdraw from RFUMS may face critical consequences regarding their visa status. To discuss the implications of noncompliance well in advance of processing a withdrawal, international students should contact the International Student Advisor.

Failure to attend classes or verbal notification to instructors does not constitute withdrawal. Students who drop out of a course without officially withdrawing as previously described will be credited with failure. A student failing to register for courses and/or fail to respond to official communication about their enrollment is grounds for Administrative Withdrawal.

The RFUMS Refund Policy applies to students who withdraw from a program. Please consult that policy for specific refund structure. Changes in tuition and fees for withdrawing from one (or more) course vary; please consult your program for specifics. As a *reference only*, below is the RFUMS Refund Policy.

- When a student withdraws from the program before the end of the first week of classes, 100% refund of tuition is made
- When withdrawal from the program is made before the end of the second week, the refund is 75%
- When withdrawal from the program is made before the end of the third week, the refund is 50%
- When withdrawal from the program is made before the end of the fourth week, the refund is 25%.
- After fourth week, no refund is granted

Dismissal

Dismissal of a student from RFUMS is considered a very serious action. Dismissal of a student must follow the process defined by the College as defined in the Guidelines and Procedures for Student Progression, Evaluation, Assessment, and Recognition, available on the College of Pharmacy website. Dismissal from a program constitutes dismissal from the University.

Appeals of Withdrawal or Dismissal

All appeals of dismissal or withdrawal must follow the appeals process defined in the College of Pharmacy's Guidelines and Procedures for Student Progression, Evaluation, Assessment, and Recognition.

Statement of Policy on Professionalism and Ethics

All students at RFUMS are expected to exhibit professional, responsible, and ethical behavior. Students should display this behavior as students in the University, as healthcare providers in the clinical setting, and as researchers in the laboratory or clinic. All students should, therefore, possess the highest degree of personal integrity and be able to reason about ethical issues in their professional life. Students are expected to treat patients and research subjects with respect, compassion and sincerity, irrespective of race, color, creed, ethnic origin, religion, disability, gender, sexual orientation, or socioeconomic class, and to maintain strict confidentiality. Students are expected to be honest and trustworthy, to respect the property of others, and to follow the code of professional ethics appropriate to their discipline. Any departures from these standards may result in disciplinary action. See Student Conduct Policy in the RFUMS Handbook and the Standards for Professional Behavior in the College of Pharmacy's Guidelines and Procedures for Student Progression, Evaluation, Assessment, and Recognition for details.

Procedures for Consideration of Violations of Professional and Ethical Standards

A student alleged to have committed ethical or professional misconduct shall be afforded due notice and process in the investigation, deliberation, and decision about such allegations and potential penalties. See Student Conduct Policy in the RFUMS Handbook and the Standards for Professional Behavior in the College of Pharmacy's Guidelines and Procedures for Student Progression, Evaluation, Assessment, and Recognition for details.

Student Records

All documents and records pertaining to a student's admission and academic performance in the University are filed in the Office of the Registrar. Refer to the RFUMS Student Handbook or the Registrar's website for information regarding Students' Personal and Academic Information.

Leave of Absence

Students in the College of Pharmacy are expected to maintain continuity and diligence in pursuing the PharmD degree. When, for any reason, a student must be absent from academic study at the University, students shall petition the Office of Academic Affairs for a leave of absence and receive approval before leaving.

A request for leave of absence during a period of academic difficulty is authorized only after careful consideration. In general, such leave is granted only after agreement on a structured program of activities to be pursued during the leave of absence. These activities are designed to help students overcome academic difficulties; they will have to be successfully completed as a condition for re-admittance to classes.

Leaves of absence requested for reasons of health, maternity, or finances are granted as a matter of course. Upon resolution of the conditions for which leave was granted, students are readmitted to the same academic standing that existed when the leave began.

The Leave of Absence Policy can be found on the Registrar's website.

Graduation Requirements

Students will be recommended for graduation by the College faculty upon successful completion of degree requirements, review of academic performance, and demonstration of professional standards.

Additional Policies and Resources

All students are required to follow the policies that supplement this Catalog which include, but are not limited to, the College of Pharmacy Student Handbook, the RFUMS Student Handbook, and the Guidelines and Procedures for Student Progression, Evaluation, Assessment, and Recognition. Please consult these documents for additional information.

Departments within the College of Pharmacy

The College of Pharmacy comprises two departments; the Department of Pharmaceutical Sciences and the Department of Pharmacy Practice. A major component of the Department of Pharmacy Practice is the Office of Experiential Education (OEE). The OEE develops, manages, and assesses hands-on pharmacy practice experiences that take place at practice sites which are affiliated with the program. Simulation activities and service learning are included in experiential education.

The Introductory Pharmacy Practice Experiences comprise approximately 8% of the overall curriculum, and occur through the first 3 years of study. The Advanced Pharmacy Practice Experiences comprise the entire 4th year of study, which is approximately 27% of the overall curriculum. The Introductory and Advanced Pharmacy Practice Experiences afford students the opportunity to apply the skills and abilities learned in the classroom to the practice of pharmacy in a variety of settings.

Course descriptions for the 4 years of study are included below. Note that Department of Pharmaceutical Science course names begin with YPHS and Pharmacy Practice courses begin with YPHP. Elective courses offered in the College are designated either YELP (Pharmacy Practice) or YELS (Pharmaceutical Sciences). All other designations indicate courses offered outside of the College of Pharmacy through other Rosalind Franklin University Colleges or Schools. Please contact the Office of Academic and Student Affairs at 847-578-8831 for more information about College course offerings.

College of Pharmacy Curriculum

Fall Quarter, Year 1

YPHP 500 – Introduction to Pharmacy Practice (1 h)

Orientation to the profession of pharmacy. The history and development along with the scope of the practice of pharmacy will be discussed. The ethical and regulatory foundation for pharmacy, contemporary issues, healthcare policy, and career opportunities (licensure requirements, residency/fellowship options, etc.) will be introduced and examined in an open forum of discussion with students and faculty.

Prerequisites: Pre-pharmacy curriculum and admission to program.

YPHS 501 – Pharmaceutics I: Introduction to Pharmaceutical Sciences (3 h)

This course deals with the science of drug delivery and the chemical and physical properties of a drug and its excipients that allow it to be a medicinal. We will discuss physical pharmacy, dosage forms that enable the drug delivery, and the principles of absorption, distribution, metabolism, and excretion (ADME) of drugs.

Prerequisites: Pre-pharmacy curriculum and admission to program.

YPHS 504A – Biochemical Principles for Pharmacy (2 h—with Winter Quarter = 4h total)

Basic biochemistry as it relates organ systems and disease. This includes the principles of the thermodynamics, kinetics, structure, and regulation of biochemically significant molecules and their building blocks. Biochemical constructs (such as energy production, enzymes, membranes, DNA, RNA, proteins, anabolic and catabolic pathways, etc.) are discussed with respect to pharmaceutical treatment of human disease.

Prerequisites: Pre-pharmacy curriculum and admission to program.

YPHS 510 – Fundamentals in Physiology I (4 h)

The fundamentals of human physiology relating to basic cellular function, embryology, the cardiovascular system, respiration, the endocrine system (including reproduction), the gastrointestinal system, the renal system and hematology (including the function of white blood cells) will be presented. Physiological concepts and mechanisms will be organized according to five themes: Homeostasis & Control systems, Biological Energy Use (metabolism), Structure/Function Relationships, Communication, Pathophysiology.

Prerequisites: Pre-pharmacy curriculum and admission to program.

HMTD 515A – Foundations for Interprofessional Practice (1 h)

This course is an experiential learning opportunity for students to interact in interprofessional health care teams which extends through the fall and winter of the first year. This interactive course is intended to help prepare the health care professional student to provide effective patient-centered health care through small group discussion and problem solving activities. Topics include: team interaction, leadership, communication, service learning, information literacy, team-based approaches towards patient-centered care which includes understanding the roles of health professions, patient interviewing, interprofessional care plans, health literacy the impact of culture and health beliefs and the provision of services, disparities in the healthcare delivery system, and awareness of prevention education and self management the

impact health/wellness. Interprofessional teams of students develop and participate in significant community based service learning projects or a clinical experience.

Prerequisites: Pre-pharmacy curriculum and admission to program.

YPHP 506 – Pharmacy Skills Laboratory I (2h)

Orientation to the practical skills utilized in community pharmacy settings. Students will engage in a hands-on approach in learning the appropriate and safe delivery of immunizations through the American Pharmacist Association’s Pharmacist-Based Immunization Delivery Certificate Program. Students will also gain experience in the management of pharmacy workflow and application of selected pharmacy laws and regulations. The Top 200 drug products will be emphasized.

Prerequisites: Pre-pharmacy curriculum and admission to program.

YPHP 515A – Introductory Pharmacy Practice Experience I (1 h)

The Introductory Pharmacy Practice Experiences (IPPEs) are designed to provide the foundation for the student pharmacists in preparation for their Advanced Pharmacy Practice Experiences (APPEs). This course is a structured introduction to pharmacy practice in a community pharmacy setting. The community IPPE spans the P1 year, during which the students will engage in basic distributive and administrative processes in community pharmacies and gain initial experience interacting directly with patients, preceptors, technicians, and other health care providers and pharmacy personnel. The community pharmacy IPPE is a longitudinal rotation experience, during which the students will complete at least 100 hours in a community pharmacy. Simulation activities and the Introductory Collaborative Learning Bridge (ICLB) project are also incorporated into this course.

Prerequisites: Pre-pharmacy curriculum and admission to program.

<i>Winter Quarter, Year 1</i>

YPHS 504B – Biochemical Principles for Pharmacy (2 h—with Fall Quarter = 4h total)

Basic biochemistry as it relates organ systems and disease. This includes the principles of the thermodynamics, kinetics, structure, and regulation of biochemically significant molecules and their building blocks. Biochemical constructs (such as energy production, enzymes, membranes, DNA, RNA, proteins, anabolic and catabolic pathways, etc.) are discussed with respect to pharmaceutical treatment of human disease.

Prerequisites: Pre-pharmacy curriculum and admission to program.

YPHS 507A – Microbiology & Immunology (4 h—with Spring Quarter = 7h total) The first in a comprehensive series of lectures on fundamental microbiological and immunological principles. Chemical and physical properties of microorganisms are used to explain how microorganisms cause disease, and how the human host defenses combat disease-causing agents. Case studies are presented throughout the course. Symptoms of infectious diseases and immunologic disorders are emphasized.

Prerequisites: Fundamentals in Physiology I, II (YPHS 510, 511).

YPHP 504 – Health Care Systems (2 h)

This course will discuss the complexities, features, and challenges of the U.S. healthcare delivery system. Emphasis will be placed on the many roles of the pharmacist. The regulation and financing of healthcare, including methods for providing care (private vs. public plans, single

payer, etc.) will be considered. The course also includes an intermediate discussion of ethics pertinent to the pharmacist's role in healthcare delivery.

Prerequisites: Introduction to Pharmacy Practice (YPHP 500).

YPHS 502 – Pharmaceutics II: Dosage Forms (2 h)

Pharmaceutics II is the second in the series of course, describing the science of drug delivery and the dosage forms that enable the drug delivery. An introduction to pharmacokinetics will be provided as it relates to drug delivery and dosage forms. In addition, the main emphasis will be on drug delivery systems for a number of routes of administration, including novel or complex systems. The drug development process will also be discussed. Clinical correlations will be provided during the course to reinforce the use of this information in pharmacy practice. Clinical correlations will be comprised of various teaching methodologies including cases, problem solving exercises, and other student-based active learning exercises.

Prerequisites: Pharmaceutics I (YPHP 501).

HMTD 515B – Foundations for Interprofessional Practice (1 h)

See description for Fall course HMTD 515A – Foundations for Interprofessional Practice

Prerequisites: Pre-pharmacy curriculum and admission to program.

YPHP 507 – Pharmacy Skills Laboratory II (2 h)

Expansion of practical skills in the community pharmacy setting. Building on Pharmacy Skills Laboratory I, students will gain additional practical skills in this course including procurement of appropriate drug information resources, application of public health principles, communication with patients of varying health literacy levels, and advocacy for the safe and appropriate use of medications. Students will also become orientated to patient physical assessment through obtaining vital signs including pulse and blood pressure. Students will also learn fundamental microbiologic tests and their application to pharmacy practice. The Top 200 drug products will be emphasized.

Prerequisites: Pharmacy Skills Laboratory I (YPHP506)

YPHS 511 – Fundamentals in Physiology II (4 h)

This course is a continuation of **YPHS 510 Fundamentals of Physiology I**, and will focus on the fundamentals of human physiology relating to the nervous system and muscle physiology. Physiological concepts and mechanisms will be organized according to five themes: Homeostasis & Control systems, Biological Energy Use (metabolism), Structure/Function Relationships, Communication, Pathophysiology

Prerequisites: Fundamentals in Physiology I (YPHS 510).

YPHP 515B – Introductory Pharmacy Practice Experience II (1 h)

See YPHP 515A, Fall Quarter, Year 1

Prerequisites: Successful completion of previous quarter.

<i>Spring Quarter, Year 1</i>

YPHS 507B - Microbiology & Immunology (3 h—with Fall Quarter = 7h total)

The second in a comprehensive series of lectures on fundamental microbiological and immunological principles. Chemical and physical properties of microorganisms are used to explain how microorganisms cause disease and how the human host's defenses combat

disease-causing agents. Case studies are presented throughout the course. Symptoms of infectious diseases and immunologic disorders are emphasized.

Prerequisites: Microbiology & Immunology A (YPHS 507A).

YPHS 503 – Pharmaceutics III: Compounding and Calculations (3 h)

Pharmaceutics III is the third in the series of course., This course develops knowledge and skills and covers all aspects of pharmaceutical calculations including fundamentals of measurement and calculation, measurement systems, dosage and concentration units, isotonic solutions, electrolyte solutions, parenteral admixtures, and calculations related to extemporaneous compounding. It also develops knowledge of sterile dosage form and delivery systems, products of biotechnology and radiopharmaceuticals. Accurate and effective pharmaceutical formulation is a key skill which must be mastered by all student pharmacists. The laboratory portion of this course will introduce students to practical aspects of extemporaneous compounding. This module teaches the basics of non-sterile compounding in the pharmacy setting. Students will be practicing exercises relating to the key dosage forms encountered during pharmacy practice.

Prerequisites: Pharmaceutics II (YPHS 502).

YPHS 506 – Medicinal Chemistry (2 h)

Selected principles of physical chemistry as related to the pharmaceutical sciences including structure-activity relationships, functional groups, drug stability & solubility, acid-base chemistry, metabolic reactions, and drug allergenicity.

Prerequisites: Biochemical Principles for Pharmacy (YPHS 504A, B), Microbiology & Immunology A (YPHS 507A).

YPHP 510 – Self-Care and Non-Prescription Medications (3 h)

The student pharmacist will learn to assist patients with the appropriate selection and use of nonprescription, as well as non-pharmacologic, treatment options for commonly encountered disease states and patient complaints. Patient assessment and education are key components to this course. Additional emphasis will be placed on patient self-monitoring, referrals, and follow-up.

Prerequisites: Successful completion of P1 Fall and Winter courses.

MMTD 510 – Introduction to Bioethics & Health Law (2 h)

This course introduces the student to the basics of ethical issues in the practice of medicine and pharmacy, as well as to recognize the controversial nature of issues such as patient's rights. Elements of research into the foundations on which positions are taken on medical issues are stressed. Logical approaches for such positions are developed. Inquiry into the historical basis of ethical problems, appreciation for alternative positions on ethical issues, and identifying the ethical issues concomitant with the new developments in the practice of medicine and pharmacy are emphasized.

Prerequisites: Introduction to Pharmacy Practice (YPHP 500).

YPHS 505 – Medical Literature Evaluation (1 h)

This course is an introduction to understanding and interpreting medical literature. The course will review the basic structure of scientific/medical articles, examine the various sources of the literature and informatics, critically evaluate articles, and discuss the clinical application of information. Course will be part lecture and part journal club.

Prerequisites: Interprofessional Healthcare Teams (HMTD 500).

YPHP 508 - Pharmacy Skills Laboratory III (1 h)

Introduction to fundamental pharmacy calculations and expansion on patient counseling and communication. Students will use various practice and simulation devices to understand and be able to communicate effectively with patients about the appropriate and safe use of medication products including inhalers, transdermal patches, otic and ophthalmic products, and self-administered subcutaneous medications. The Top 200 drug products will be emphasized.

Prerequisites: Pharmacy Skills Laboratory I, II (YPHP 506, 507).

YPHP 517A – Introductory Pharmacy Practice Experience III (1.5 h)

See YPHP 515A Fall Quarter, Year 1

Prerequisites: Successful completion of previous quarter.

<i>Summer Quarter, Year 1</i>

YPHP 517B – Introductory Pharmacy Practice Experience IV (2.5 h)

See YPHP 515A, Fall Quarter, Year 1

Prerequisites: Successful completion of previous quarter.

<i>Fall Quarter, Year 2</i>

YPHP 620 – Pharmacotherapy I (6 h)

The clinical application of drug therapy is discussed at an advanced level using a systems-based approach. Topics presented include an overview of pertinent epidemiology, pathophysiology, diagnostics, clinical presentation, and general management of disease states. Each topic will focus on using evidence-based medicine for the appropriate selection of drug therapy and monitoring in order to optimize patient outcomes in a safe, cost-conscious manner.

Prerequisites: Fundamentals in Physiology I, II (YPHS 510, 511), Self-Care and Non-Prescription Medications (YPHP 510), Biochemical Principles for Pharmacy (YPHS 504A, B)

PBBS 601A – Pharmacology (5 h—with Winter Quarter = 9 h total)

This two quarter course (PBBS 601A and 601B) is a comprehensive presentation of medical pharmacology. The general principles of drug disposition including drug absorption, distribution, metabolism, elimination, and pharmacokinetics are covered, as well as the pharmacodynamics of major drug groups. Emphasis is on the mechanism of drug action, clinical uses, adverse effects, contraindications, and clinically important drug interactions. Dosage is not emphasized unless specifically stated by the instructor. Drugs are presented on a systems basis, and each drug class includes practical clinical correlations.

Prerequisites: Pharmaceutics I-III (YPHS 501-503), Biochemical Principles for Pharmacy (YPHS 504A, B), and Microbiology & Immunology A and B (YPHS 507A,B).

YPHS 610A – Advanced Medicinal Chemistry (1 h)

This course will run concurrently with the Pharmacology course (PBBS 601A&B) to present the underlying chemistry of the active pharmacological ingredients of medications used to treat

patients.

Prerequisites: Enrollment in PBBS 601A

HPAS 528 - Research & Statistics (2 h)

The purpose of this course is to give Psychology, Nursing, Pharmacy and Physician Assistant students a broad introduction to research and statistics, with the goal of making them intelligent consumers of published research who can practice evidenced-based medicine. Students will learn how to identify and design high-quality research projects, as well as how to correctly analyze the results and draw appropriate conclusions.

Prerequisites: Medical Literature Evaluation (YPHS 505).

YPHS 620A – Life-long Learning (credit awarded in Spring)

To introduce students to the process of learning about new developments in science, medicine and pharmacy that happens outside of the classroom or their immediate practice environment.

Prerequisites: Successful completion of P1 courses

YPHP 606 – Pharmacy Skills Lab IV (2 h)

Orientation to physical assessment, clinical laboratory testing, and health-systems pharmacy. Students will learn appropriate technique in physical assessment including proper reporting of findings. Illustrative case discussions will emphasize the importance of the interpretation and application of the physical exam and chemistry tests in order to monitor and adjust medication therapy. Students will be introduced to home diagnostics and point of care testing.

Prerequisites: Pharmacy Skills Lab I, II, III (YPHP506, 507, 508).

YPHP 615A – Introductory Pharmacy Practice Experience V (2 h)

The Introductory Pharmacy Practice Experiences (IPPEs) are designed to provide the foundation for student pharmacists in preparation for their Advanced Pharmacy Practice Experiences (APPEs). This course is a structured introduction to pharmacy practice in a health-system setting. The health-system IPPE is spans the P2 year, during which the students will engage in basic distributive and administrative processes in health-system pharmacies and gain initial experience interacting directly with patients, preceptors, technicians, and other healthcare providers and pharmacy personnel. The health-system IPPE is a longitudinal rotation experience, during which the students will complete at least 104 hours in a health-system pharmacy. Simulation activities and the Introductory Collaborative Learning Bridge (ICLB) project are also incorporated into this course.

Prerequisites: Successful completion of previous year.

<i>Winter Quarter, Year 2</i>

YPHP 621 – Pharmacotherapy II (4 h)

The clinical application of drug therapy is discussed at an advanced level using a systems-based approach. Topics presented include an overview of pertinent epidemiology, pathophysiology, diagnostics, clinical presentation, and general management of disease states. Each topic will focus on using evidence-based medicine for the appropriate selection of drug therapy and monitoring in order to optimize patient outcomes in a safe, cost-conscious manner.

Prerequisites: Fundamentals in Physiology I, II (YPHS 510, 511), Self-Care and Non-Prescription Medications (YPHP 510), Biochemical Principles for Pharmacy (YPHS 504A, B)

PBBS 601B – Pharmacology (4 h—with Fall Quarter = 9 h total)

See Pharmacology (PBBS 601A), Fall Quarter, Year 2

Prerequisites: Pharmacology (PBBS 601A).

YPHS 610B – Advanced Medicinal Chemistry (1 h)

See Advanced Medicinal Chemistry (YPHS 610A), Fall Quarter, Year 2

Prerequisites: Enrollment in PBBS 601B

YPHS 600 – Basic Pharmacokinetics and Pharmacodynamics (3 h)

This course presents the basic fundamental principles underlying drug action in the body. Pharmacokinetics describes the relationship of drug dose and the time course of drug presence in the body, including the concepts of drug half-life, steady state concentration, absorption, distribution, metabolism and excretion. Processes that influence the pharmacokinetics of drugs, including formulation, physicochemical, physiological, pharmacological and pathological factors will be discussed. Pharmacodynamics presents the effects of drug action at the receptor site and includes the concepts of agonist, antagonist, competitive and non-competitive inhibition, and therapeutic effect. The use of mathematical equations to describe the pharmacokinetic concepts and principles of drug action are introduced and applied to dosage regimen determinations. The course teaches the fundamentals of calculations necessary to determine drug loading dose, maintenance dose, and dosing interval and prepares the student for YPHS 604 Clinical Pharmacokinetics and Pharmacodynamics.

Prerequisites: Pharmacology (PBBS 601A), Biochemical Principles for Pharmacy (YPHS 504A, B).

YPHS 620B – Life-long Learning (credit awarded in Spring)

To introduce students to the process of learning about new developments in science, medicine and pharmacy that happens outside of the classroom or their immediate practice environment.

Prerequisites: Successful completion of P1 year

YPHP 607 – Pharmacy Skills Lab V (2 h)

Continuation of practical applications in health-systems pharmacy. Sterile technique and IV compounding will be introduced. Students will also use the hands-on approach to learn about key aspects of health-systems pharmacy including distribution of drug products, formulary management, pharmacy and therapeutics committees, electronic medical records, and medication reconciliation. Laws, regulations, and accrediting agencies for health-systems will be discussed. Students will continue to learn and apply chemistry and physical exam findings in the management of drug therapies.

Prerequisites: Successful completion of Pharmacy Skills Lab I, II, III, IV (YPHP506, 507, 508, 606).

YPHP 615B – Introductory Pharmacy Practice Experience VI (2 h)

See YPHP 615A, Fall Quarter, Year 2

Prerequisites: Successful completion of previous quarter.

<p><i>Spring Quarter, Year 2</i></p>

YPHP 622 – Pharmacotherapy III (4 h)

The clinical application of drug therapy is discussed at an advanced level using a systems-based approach. Topics presented include an overview of pertinent epidemiology, pathophysiology, diagnostics, clinical presentation, and general management of disease states. Each topic will focus on using evidence-based medicine for the appropriate selection of drug therapy and monitoring in order to optimize patient outcomes in a safe, cost-conscious manner.

Prerequisites: Fundamentals in Physiology I, II (YPHS 510, 511), Self-Care and Non-Prescription Medications (YPHP 510), Biochemical Principles for Pharmacy (YPHS 504A, B)

YPHP 604 – Clinical Pharmacokinetics and Pharmacodynamics (2 h)

This course expands upon the theoretical concepts explored in YPHS 600 Basic Pharmacokinetics and Pharmacodynamics. This course will focus on common clinical pharmacokinetics/pharmacodynamic principles and their application to specific drug therapy regimen design, monitoring, and management.

Prerequisites: Basic Pharmacokinetics and Pharmacodynamics (YPHS 600).

YPHS 609 – Introduction to Pharmacogenomics and Molecular Biology (2 h)

This course will introduce students to important principles of human genetics and molecular biology that apply to contemporary and future pharmaceutical practice. Topics covered include basic concepts in human genetics and genomics, information flow in biological systems, including the structure of DNA, RNA, an overview of state-of-the-art technologies including cloning, recombinant DNA, PCR and microchips. The course will include some classical case studies as well as discussions of ethical challenges in the rapidly growing area of personalized drug therapy based on molecular genetic information.

Prerequisites: Biochemical Principles for Pharmacy (YPHS 504A and YPHS 504B).

YPHS 620C – Life-long Learning (1 h)

To introduce students to the process of learning about new developments in science, medicine and pharmacy that happens outside of the classroom or their immediate practice environment.

Prerequisites: Successful completion of P1 year

YPHP 608 – Pharmacy Skills Lab VI (2 h)

This course is designed to be a continuation of the material covered in YPHP 606 and YPHP 607. Students will continue to learn appropriate technique and application of laboratory and physical assessment findings in the management of drug therapies.

Prerequisites: Successful completion of Pharmacy Skills Lab I–V (YPHP506, 507, 508, 606, 607).

YPHP 617 – Introductory Pharmacy Practice Experience VII (2 h)

See YPHP 615A, Fall Quarter, Year 2

Prerequisites: Successful completion of previous quarter.

Summer Quarter (between P2 and P3 years)

YPHP 715A – Introductory Pharmacy Practice Experience VIII (credit given in P3 Spring)

The P3 IPPE elective will satisfy 40 hours of the 300 hours allocated to IPPEs. Elective opportunities are offered in a variety of pharmacy practice settings. Students will complete these hours over the course of one week. Students will be scheduled during one of four allocated blocks of time during the P3 year, either prior to the commencement of the P3 year or during an intersession break. Students will complete a service learning project prior to the close of the P3 year as a component of this course. During the spring quarter (Q3) of the P3 year, students will participate in an eight-hour workshop that will serve to transition students from introductory to advanced pharmacy practice experiences.

Prerequisites: Successful completion of previous quarter.

Fall Quarter, Year 3

YPHP 710 – Pharmacotherapy IV (2 h)

The clinical application of drug therapy is discussed at an advanced level using a systems-based approach. Topics presented include an overview of pertinent epidemiology, pathophysiology, diagnostics, clinical presentation, and general management of disease states. Each topic will focus on using evidence-based medicine for the appropriate selection of drug therapy and monitoring in order to optimize patient outcomes in a safe, cost-conscious manner.

Prerequisites: Pharmacotherapy I, II, III (YPHP 620, 621, 622)

YPHP 716 – Interprofessional Case Collaborations (1 h)

The purpose of this one credit course is to prepare students to work together in collaborative interprofessional teams while understanding the concepts of pathophysiology, clinical presentation, diagnostic techniques and medical management and treatments as they apply to Physician Assistants and Pharmacists. This course is a supplemental case-based course to the General Medicine (Physician Assistant) and Pharmacotherapy (Pharmacy) courses. This course will also provide reinforcement of key concepts relevant to patient care as students work interprofessionally to solve case-based, patient-centered issues. Relevant interprofessional topics will be addressed throughout the course.

Prerequisites: Enrollment in YPHP 710

YPHS 704 – Pharmaceutical Biotechnology (2 h)

The use of various technologies in the development of biological therapies. The discussion includes current and future approaches, including monoclonal antibodies, novel pharmaceutical administration (e.g., stents), genetic modification, nanotechnologies, therapeutic proteins and biological response modifiers, etc.

Prerequisites: Biochemical Principles for Pharmacy (YPHS 504), Introduction to Pharmacogenomics and Molecular Biology (YPHS 609), Medicinal Chemistry (YPHS 506).

YPHP 709 – Health Care and Pharmacy Law (3 h)

This course will begin with an overview of the federal and state systems of government with an emphasis on how laws are made and executed as well as cases adjudicated within those two systems. The course will then provide a more detailed analysis of various federal and state laws that impact the practice of pharmacy in the United States along with a discussion of the public

policy reasons and debates underlying those laws. The laws and practices of the states of Illinois and Wisconsin will be used as the primary examples of the types of laws and practices that generally exist within the individual states.

Prerequisites: Health Care Systems (YPHP 504).

YPHP 714 – Pharmacoeconomics (2 h)

Factors underlying the pricing of drugs (development, testing, licensing, manufacturing, marketing, etc.), and translation to healthcare costs. The macro/micro-economics of various aspects of pharmacy practice are discussed, including the impact of such pricing on hospital, retail, and other environments. Financial aspects of pharmacy management are also presented, including personnel and insurance costs, fixed and recurring expenses, etc. Includes drug reimbursement, Medicare-Medicaid, managed care organizations (Insurance, formularies, etc.), formulary management, and investments.

Prerequisites: Health Care Systems (YPHP 504) and Introduction to Pharmacy Practice (YPHP 500).

YPHS 720A – Life-long Learning (credit awarded in Spring)

To introduce students to the process of learning about new developments in science, medicine and pharmacy that happens outside of the classroom or their immediate practice environment.

Prerequisites: Successful completion of P2 year

YPHP 706 – Pharmacy Skills Lab VII (1 h)

Integration and application of skills into pharmacy practice. Students will improve their skills in writing SOAP notes, developing patient-care plans, and providing successful drug-therapy related presentations to peers. Students will begin to evaluate and apply evidence based medical literature to clinical practice.

Development of skills that will be vital for successful completion of advanced pharmacy practice experiences (APPEs) will be a focus of this course.

Prerequisites: Successful completion of Pharmacy Skills Lab I–VI (YPHP 506, 507, 508, 606, 607, 608).

YPHP 715B – Introductory Pharmacy Practice Experience IX (credit given in P3 Spring)

See YPHP 715A, Summer Quarter, Year 3

Prerequisites: Successful completion of previous quarter.

Winter Quarter, Year 3

YPHP 711 – Pharmacotherapy V (3 h)

The clinical application of drug therapy is discussed at an advanced level using a systems-based approach. Topics presented include an overview of pertinent epidemiology, pathophysiology, diagnostics, clinical presentation, and general management of disease states. Each topic will focus on using evidence-based medicine for the appropriate selection of drug therapy and monitoring in order to optimize patient outcomes in a safe, cost-conscious manner.

Prerequisites: Pharmacotherapy I, II, III (YPHP 620, 621, 622)

YPHP 717 – Interprofessional Case Collaborations (1 h)

See YPHP 716 , Fall Quarter, Year 3

YPHP 703 – Pharmacy Management and Hospital Practice (3 h)

Presents factors and issues involved in pharmacy management. Includes pharmacy business plan (contracts, proposals), FDA regulatory requirements including drug security and records, marketing of practice and products, financial accounting, employee performance reviews, policies for promotion, drug, and inventory maintenance, and EEOC requirements.

This course also focuses on the practice of pharmacy in the hospital setting. General aspects of hospital administration and policy as well as unique features of clinical rounding and formulary experiences are examined. Students will engage in discussions about the electronic medical record and other current and future technologies likely to be utilized as in-hospital pharmacists.

Prerequisites: Health Care Systems (YPHP 504) and Pharmacoeconomics (YPHP 714).

YPHS 705 – Basic Spanish for Pharmacists (2 h)

This course teaches basic Spanish with an emphasis on medical terms and phrases commonly used to describe illness and discomfort. Language used to counsel patients in the appropriate administration of drugs, cautions required, possible side effects, and other drug therapy issues commonly encountered by the pharmacist will be a focus of the course.

Prerequisites: Successful completion of P2 year

YPHP 713 – Pharmacogenomics (1h)

This course will explore the application of pharmacogenomics to the practice of pharmacy and medicine. Topics include clinical applications in key therapeutics areas with a focus on drugs with pharmacogenomics based labeling, common genetic alterations involved in drug metabolism and drug transport, ethical concepts in practice and research, and social/legal implications. This course will emphasize the importance of genetics on variability in patient response to drug therapy in the context of other relevant sources of variability.

Prerequisites: Introduction to Pharmacogenomics and Molecular Biology (YPHS 609).

YPHS 720B – Life-long Learning (credit awarded in Spring)

To introduce students to the process of learning about new developments in science, medicine and pharmacy that happens outside of the classroom or their immediate practice environment.

Prerequisites: Successful completion of P2 year

YPHP 707 – Pharmacy Skills Lab VIII (1 h)

This course will focus on continued development of skills learned in Pharmacy Skills Lab VII with a focus on advanced and complicated case studies. Students will continue to develop medical literature evaluation skills.

Prerequisites: Successful completion of Pharmacy Skills Lab I, II, III, IV, V, VI, VII (YPHP506, 507, 508, 606, 607, 608, 706).

YPHP 715C – Introductory Pharmacy Practice Experience X (credit given in P3 Spring)

See YPHP 715A, Summer Quarter, Year 3

Prerequisites: Successful completion of previous quarter.

<p><i>Spring Quarter, Year 3</i></p>

YPHP 712 – Pharmacotherapy VI (3 h)

The clinical application of drug therapy is discussed at an advanced level using a systems-based approach. Topics presented include an overview of pertinent epidemiology, pathophysiology, diagnostics, clinical presentation, and general management of disease states. Each topic will focus on using evidence-based medicine for the appropriate selection of drug therapy and monitoring in order to optimize patient outcomes in a safe, cost-conscious manner.

Prerequisites: Pharmacotherapy I, II, III (YPHP 620, 621, 622)

YPHP 718 – Interprofessional Case Collaborations

See YPHP 716, Fall Quarter, Year 3

YPHS 709 – Epidemiology (2 h)

This course acquaints the student with the basic concepts of biostatistics and introductory Clinical Epidemiology. Elements of research design are stressed so that the student is able to critically evaluate research literature. Practice in simple statistical skills and analysis is included.

Prerequisites: Medical Literature Evaluation (YPHS 505) and Research and Statistics (HPAS 528).

HMTD 551 – Leadership in the Healthcare Environment (3 h)

This interprofessional course is designed to introduce the student to the concept of leadership within the healthcare environment. Leadership skills learned as part of previous service activities, sports, or academic study will be applied to the healthcare setting using case studies and small group discussion. The course includes an overview of leadership styles, particularly as they relate to topics such as building teams, evaluating others, managing finances, managing risk, marketing of healthcare, and healthcare policy. As an outcome of this interdisciplinary course, it is intended that students will discuss the similarities and differences of leadership within each of their professional fields, and learn that each person will have the potential to be a leader in their profession, practice, and personal relationships.

Prerequisites: Health Care Systems (YPHP 504), Pharmacoeconomics (YPHP 714)

YPHS 720C – Life-long Learning (1 h)

To introduce students to the process of learning about new developments in science, medicine and pharmacy that happens outside of the classroom or their immediate practice environment.

Prerequisites: Successful completion of P2 year

YPHP 700 – Current Topics in Pharmacy (1 h)

This seminar course consists of multiple small groups, in which each group reads and discusses a variety of topical papers relevant to the scope of pharmacy practice. Students present individually and in teams.

Prerequisites: Medical Literature Evaluation (YPHS 505), Research and Statistics (HPAS 528), Health Care and Pharmacy Law (YPHP 709), Pharmacoeconomics (YPHP 714), Self-Care and Non-prescription Medications (YPHP 510), and Pharmacology A and B (PBBS 601A and B).

YPHP 708 – Pharmacy Skills Lab IX (1 h)

This course will continue to allow students to develop their pharmacy skills in order to prepare them for their advanced pharmacy practice experience. Students will have the opportunity to

discuss ethical dilemmas commonly seen in clinical practice as well as discussing the importance of cultural competency.

Prerequisites: Successful completion of all former pharmacy skills labs.

YPHP 715D – Introductory Pharmacy Practice Experience XI (3.5 h given for IPPE VIII-XI)

See YPHP 715A, Summer Quarter, Year 3

Prerequisites: Successful completion of previous quarter.

<i>Year 4</i>

YPHP 801 – 806 - Advanced Pharmacy Practice Experience (9 h each; 54 h total)

Each student will have six 6-week experiences throughout the fourth year that satisfy 1440 hours of the experiential curriculum. Each experience is allotted nine credit hours and provides students an opportunity to apply and advance the knowledge, skills, and attitudes attained throughout their first three years of the program. These experiences include:

- Community Pharmacy
- Health-System Pharmacy
- Inpatient/Acute Care
- Ambulatory Care
- Two Elective Experiences

Prerequisites: Successful completion of P3 year and all introductory pharmacy practice experience requirements.

P3 Elective Offerings 2014–2015

Fall Quarter			
Elective Title & Information	Course Director(s)	Credit Hours	Description
YELP 701 Critical Care and Medical Emergencies <i>Grade – A, B, C, F</i>	Dr. Kane	2h	This course will introduce students to a wide variety of topics related to critical care and acute medical emergencies. Topics and content will focus on drug therapy and the role of the pharmacist within an interprofessional critical care team. The course format will include didactic lectures, hands-on activities, and class-based discussions.
YELP 703 Advanced Diabetes Management MAX STUDENTS: 40 <i>Grade – A, B, C, F</i>	Dr. Patel	1h	This elective course provides concentrated and in-depth knowledge of management of diabetes through hands-on learning in lecture and small group settings. The topics include medical nutrition, long-term complications, insulin dosing, operating insulin pumps, troubleshooting parenteral medication and glucometer devices, use of e-tools for DM management, social and behavioral issues associated with diabetes, management of gestational diabetes, management of pediatric diabetes, and complementary and alternative medicine in diabetes. Students will be required to participate in a week long experience as a diabetic patient, in which they will self-administer “insulin” injections and monitor blood glucose using a glucometer.
YELP 706 Community Pharmacy Practice & Management <i>Grade – A, B, C, F</i>	Dr. Angelo Prof. Winnike	2h	This course is designed for student pharmacists with an interest in community pharmacy. Students will learn about the business and management aspects of community pharmacy, as well as opportunities for clinical services. Incorporating sustainable business models for the pharmacy and services offered will be a common theme. Communication skills will be emphasized throughout the course. Open to P2 Students

Winter Quarter			
Elective Title & Information	Course Director(s)	Credit Hours	Description
YELP 700 Deconstructing Landmark Clinical Trials MAX STUDENTS: 25 <i>Grade – A, B, C, F</i>	Dr. Kane	2h	This course will introduce students to a wide variety of controversial landmark clinical trials that have significantly impacted the practice of medicine. In addition to identifying pivotal trials that have shaped treatment guidelines for a variety of diseases, students will learn to deconstruct the trial design, results, and conclusions to become appropriately skeptical, critical-thinking pharmacists. Each week, students will be required to read one or more pivotal clinical trials prior to class and be prepared for a weekly quiz over the required reading. Class time will primarily be devoted to discussion-based learning regarding the trial methodology, analysis, and impact on clinical practice. Open to P2 Students
YELS 700 Marijuana: Pharmacology, Politics & Medical Uses <i>Pass/Fail</i>	Dr. Oltmans	1h	Marijuana is being approved for medical use in an increasing number of states. This course will examine the history, chemistry, pharmacology, and medical aspects of this drug, along with the politics which are an inherent part of any drug with recreational properties.
YELS 701 Structure-Activity Relationships of Drugs <i>Grade – A, B, C, F</i>	Dr. Harrison & Dr. Walters	1h	This course will examine how systematic alterations of chemical structure can be used to design and optimize drug molecules. Following a series of introductory lectures, students will select a class of drugs, investigate published structure-activity relationships, and give a presentation summarizing their findings.
YELP 702 Toxicology <i>Grade – A, B, C, F</i>	Dr. Lyden	2h	Pharmacists play an important role in the treatment of drug overdose. This course will address the provision of care in the “poisoned patient”, including clinical presentation, assessment, and treatment of common drug, chemical, and biologic agent overdoses. The format includes lectures by faculty and case discussions.

Spring Quarter			
Elective Title & Information	Course Director(s)	Credit Hours	Description
YELP 705 Advanced Pharmacoeconomics <i>Pass/Fail</i>	Dr. Rahman	2h	This course is designed to provide the student with the advanced concepts of economics and market forces in general. A detailed discussion on Pharmacoeconomics as it relates to patient care. Overview of economic principles, which should enhance the understanding of the theory underlying pharmacoeconomic analysis, will be integrated in this course. A special emphasis will also be placed on applying the economic evaluations and quality of life concept to improve the allocation of limited health care resources. Upon completion of the course, the student should be able to apply the basic economic and pharmacoeconomic principles to make therapeutic and resources allocation decisions.
YELS 702 Case Studies In Microbiology and Infectious Disease <i>Grade – A, B, C, F</i>	Prof. Shanahan	2h	This microbiology course utilizes classic case studies to cover some unusual cases and many common but important topics, including resistant strains, infections in special populations, emerging infectious diseases, and infectious disease cases of importance to pharmacists.
YELP 704 Mental Health <i>Pass/Fail</i>	Dr. Dillig Dr. Shuman	1h	This course will address advanced topics in mental health and neuropsychiatry as it relates to pharmacotherapeutic intervention. The specialized role of the pharmacist in the treatment of patients with psychiatric conditions will be discussed, including contributions to mental health advocacy. Students will gain a historical perspective on the treatment of psychiatric patients, evaluate key clinical drug trials as they relate to current treatment guidelines and advancements in psychiatric treatment, and discuss management of psychiatric conditions not covered in the pharmacotherapy series. Examples of topics discussed in this elective that are not covered in the core curriculum include mental health in the media, Post Traumatic Stress Disorder (PTSD), personality disorders, child psychiatry, geriatric psychiatry, forensic psychiatry, or others based on the interest of each class. This course will utilize a combination of lecture, small group activities, case-based learning, discussion, and student presentation.
YELS 703 Advanced Spanish for Pharmacists <i>Pass/Fail</i>	Dr. Abreu	2h	This course is designed to provide advanced, culturally appropriate Spanish communication skills for pharmacists. The course is divided into the following sections: 1) basic terminology, 2) patient encounters, 3) patient data collection, and 4) patient consultation directions. The course will be taught 50% in class and 50% online, in Spanish and English. Requires Course Director's Approval.
Other Options 1) YELE 700—Lake Forest Management: Management Skills for Pharmacists 2) YELE 600—Teaching Elective 3) YELP 700 or 701—Research Elective Prior approval is needed to take these electives. Please note that these electives may or may not count towards the 6 required COP electives. Please contact the Office of Academic Affairs for additional information.			

Curriculum-at-a-Glance
(IP courses in blue)

Total Credit Hours: 195.5	% IPPEs: 7.9	% APPEs: 27.6
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YEAR 1 51 CREDITS			YEAR 2 47 CREDITS			YEAR 3 43.5 CREDITS		
FALL	14 QUARTER HOURS		FALL	18 QUARTER HOURS		FALL	12 QUARTER HOURS + ELECTIVES	
YPHP 500	Introduction to Pharmacy Practice	1 h	YPHP 620	<i>Pharmacotherapy I</i>	6 h	YPHP 710	Pharmacotherapy IV	2 h
YPHS 501	Pharmaceutics I	3 h	PBBS 601A	<i>Pharmacology</i>	5 h	YPHP 716	<i>Interprofessional Case Collaborations</i>	1 h
YPHS 510	<i>Fundamentals in Physiology I</i>	4 h	YPHS 610A	Advanced Medicinal Chemistry	1 h	YPHP 709	Health Care and Pharmacy Law	3 h
YPHS 504A	Biochemical Principles For Pharmacy	2 h	HPAS 52B	<i>Research & Statistics</i>	2 h	YPHS 704	Pharmaceutical Biotechnology	2 h
HMTD 515A	<i>Foundations For Interprofessional Practice</i>	1 h	YPHS 620A	Life-Long Learning Seminar	Spring credit	YPHP 714	Pharmacoeconomics	2 h
YPHP 505	Pharmacy Skills Lab I	2 h	YPHP 605	Pharmacy Skills Lab IV	2 h	YPHS 720A	Life-Long Learning Seminar	Spring credit
YPHP 515A	IPPE I	1 h	YPHP 615A	IPPE V	2 h	YPHP 706	Pharmacy Skills Lab VII	1 h
						YPHP 715B	IPPE IX Spring credit 1 h	
							Electives (see below)	
WINTER	18 QUARTER HOURS		WINTER	16 QUARTER HOURS		WINTER	12 QUARTER HOURS + ELECTIVES	
YPHS 504B	Biochemical Principles For Pharmacy	2 h	YPHP 621	<i>Pharmacotherapy II</i>	4 h	YPHP 711	Pharmacotherapy V	3 h
YPHS 507A	<i>Microbiology & Immunology</i>	4 h	PBBS 601B	<i>Pharmacology</i>	4 h	YPHP 717	<i>Interprofessional Case Collaborations</i>	1 h
YPHS 511	Fundamentals in Physiology II	4 h	YPHS 610B	Advanced Medicinal Chemistry	1 h	YPHS 705	Basic Spanish for Pharmacists	2 h
YPHS 502	Pharmaceutics II	2 h	YPHS 600	Basic Pharmacokinetics and Pharmacodynamics	3 h	YPHP 713	Pharmacogenomics	1 h
YPHP 504	Health Care Systems	2 h	YPHS 620B	Life-Long Learning Seminar	Spring credit	YPHP 703	Pharmacy Management and Hospital Practice	3 h
HMTD 515B	<i>Foundations For Interprofessional Practice</i>	1 h	YPHP 607	Pharmacy Skills Lab V	2 h	YPHS 720B	Life-Long Learning Seminar	Spring credit
YPHP 507	Pharmacy Skills Lab II	2 h	YPHP 615B	IPPE VI	2 h	YPHP 707	Pharmacy Skills Lab VIII	1 h
YPHP 515B	IPPE II	1h				YPHP 715C	IPPE X Spring credit 1 h	
							Electives (see below)	
SPRING	16.5 QUARTER HOURS		SPRING	13 QUARTER HOURS		SPRING	13 QUARTER HOURS + ELECTIVES	
YPHS 507B	<i>Microbiology & Immunology</i>	3 h	YPHP 622	<i>Pharmacotherapy III</i>	4 h	YPHP 712	Pharmacotherapy VI	3 h
YPHS 503	Pharmaceutics III	3 h	YPHP 604	Clinical Pharmacokinetics and Pharmacodynamics	2 h	YPHP 718	<i>Interprofessional Case Collaborations</i>	1 h
YPHS 506	Medicinal Chemistry	2 h	YPHS 609	Introduction to Pharmacogenomics and Molecular Biology	2 h	YPHS 708	<i>Epidemiology</i>	2 h
YPHP 510	Self-Care and Non-Prescription Medications	3 h	YPHS 620C	Life-Long Learning Seminar	1 hr	YPHP 700	Current Topics in Pharmacy	1 h
MMTD 510	<i>Introduction to Bioethics & Health Law</i>	2 h	YPHP 608	Pharmacy Skills Lab VI	2 h	HMTD 551	<i>Leadership in the Healthcare Environment</i>	3 h
YPHS 505	Medical Literature Evaluation	1 h	YPHP 617	IPPE VII	2 h	YPHS 720C	Life-Long Learning Seminar	1 h
YPHP 508	Pharmacy Skills Lab III	1 h				YPHP 708	Pharmacy Skills Lab IX	1 h
YPHP 517A	IPPE III	1.5 h				YPHP 715D	IPPE XI [3.5 given for IPPE VII - X]; 1 h	
							Electives (see below)	
SUMMER	2.5 QUARTER HOURS		SUMMER	0.5 QUARTER HOURS (given in P3 Spring)		P3 ELECTIVES		
YPHP 517B	IPPE IV	2.5 h	YPHP 715A	IPPE VIII 0.5 h (given in P3 Spring)		YELP 700-	Pharmacy Practice	6 credits total in P3
						YELS 700-	Pharmaceutical Sciences	

YEAR 4	YPHP 801 - 806	54 QUARTER HOURS APPE I - VI	9 h each
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Schedule Revised 07/31/14