## **Doctor of Pharmacy/Master of Public Health Joint Degree Program**

### **Rationale**

The Master of Public Health (MPH) program is designed to prepare students to become effective leaders, practitioners, researchers, and educators in public health. The College of Public Health and Health Professions offers the complete breadth of training needed for graduates to succeed in the challenging public health environment. Students can take advantage of this broad expertise to specialize in any of the five core areas of public health:

- *Biostatistics*—the application of statistical concepts and methods to biological and population-based research.
- *Environmental Health*—the identification, examination and amelioration of exposures in the environment.
- *Epidemiology*—the study of the frequency, distribution and determinants of disease, injury and disability.
- *Health Management and Policy*—the study of the theories and methods required for management of public health organizations; development of health policies and analysis of their effects on costs and access to health care.
- Social and Behavioral Sciences—the study of the effects of social and behavioral factors on population health; development, implementation and evaluation of interventions to improve health.

The mission of the Doctor of Pharmacy (Pharm.D.) program in the College of Pharmacy includes statements regarding health education and prevention of disease, which complement the mission of the MPH program. Specific outcome statements for the Doctor of Pharmacy degree program address:

- Promotion of public health through cardiopulmonary resuscitation certification and poison prevention programs;
- Promotion of public awareness of health and disease through immunization programs;
- Provision of drug information and education materials to the public; and
- Provision of education on health-related topics to health professionals and the public.

Pharm.D. graduates will have a base of knowledge in pathophysiology, microbiology, immunology, pharmacology, medicinal chemistry, pharmacokinetics, pharmacotherapy, pharmacy health care systems, and pharmacy practice that will enhance the curriculum outcomes of the MPH program. This knowledge in combination with fundamental public health principles in the five core areas should prepare graduates to make significant contributions to the health of citizens in our state and nation.

#### The Role of a Pharmacists with an MPH

The role of the pharmacists has evolved to include disease state management along with the medication dispensing process. A more population-based health care focus is also a component of modern day pharmacy practice. Pharmacists are now called upon to:

- help change and implement policy to provide safer medications to patients;
- educate and help patients manage diseases such as diabetes;
- conduct research to help better manage treatments for diseases such as cancer and HIV;
- provide education on medication management such as drug interactions between prescription drugs and herbal supplements.

The knowledge and skills of pharmacists in pharmaceutical science and clinical pharmacy together with public health create an excellent foundation for graduates to seek positions in the health care system as it relates to pharmacotherapy and health promotion, disease prevention, and medication safety. Graduates of the Doctor of Pharmacy and Master of Public Health Joint Degree program would be more competitive for positions in numerous agencies and organizations such as:

- Official government agencies, like the Centers for Disease Control and Prevention (CDC) and state/local health departments;
- Not-for-profit organizations, like those which focus on heart disease, cancer and child health issues;
- The private sector, in such arenas as the pharmaceutical industry and health insurance companies; and
- Academic institutions.

#### **Program Description**

Candidates for this program must meet the entrance requirements and procedures for both the Doctor of Pharmacy degree program in the College of Pharmacy and the Master of Public Health program in the College of Public Health and Health Professions. Students interested in public health principles and the practice of pharmacy may obtain both degrees concurrently in five years after completion of a minimum of two years of pre-pharmacy course work. The Joint Degree program is not open to students who have already earned one of the degrees. A student must satisfy the curriculum requirements of each degree.

Participants in this Joint Degree program must begin their studies in the College of Pharmacy and complete the first two years of the Doctor of Pharmacy curriculum. The third year requires courses in the MPH program. During the fourth and fifth year, students may register in both programs concurrently.

The Joint Degree curricula provide for a total of 48 credits for the MPH degree and 146 credits for the Doctor of Pharmacy degree to be completed in five years. Twelve credits of professional courses (PharmD) are counted toward the graduate degree (MPH) and 12 credits of graduate

(MPH) courses are counted toward the professional (PharmD) degree. The "shared" courses between the two programs are selected from a list of acceptable courses.

A student must satisfy the curriculum requirements for each degree before either degree is awarded. Click here to view the MPH graduation requirements and a full description of the MPH program.

### **Program Admission Requirements**

Participants in this program must have completed a minimum of two years of pre-pharmacy coursework and two years of the Doctor of Pharmacy curriculum prior to enrollment in the MPH program. A baccalaureate degree prior to enrollment in the MPH program is not required for students in the Pharm.D./MPH Joint Degree program. The Doctor of Pharmacy degree does not require a prior baccalaureate degree as the educational requirements in the Doctor of Pharmacy degree program exceed those for a baccalaureate degree. Students interested in the Joint Degree program should have a minimum 3.0 grade point average in the two years of the Doctor of Pharmacy degree program. Students must be in the Doctor of Pharmacy program, have access to an appropriate computer, and have documentation of immunizations.

### **Program Application Materials to the MPH Program**

Students must submit the University <u>Application Form for Admission to Graduate School</u>. In addition, a copy of all transcripts, TOEFL scores (if applicable, i.e. if English is not the primary language), three letters of recommendation, a letter of intent outlining career goals and program interest, copy of residency form, and relevant immunization forms are required. GRE scores are waived for applicants to the joint PharmD/MPH program.

At the time of application to the MPH program, a minimum of 3.0 GPA in the 60 hours of professional coursework during the first two professional years of study is required. For international students, a TOEFL score of at least 550 on the written version or 213 on the computer-based version is required. Please refer to the MPH website at <a href="http://mph.ufl.edu/admissions/admission-criteria/">http://mph.ufl.edu/admissions/admission-criteria/</a> for detailed information regarding additional admission criteria, application materials and procedures.

### **Application Deadline**

All application materials must be received by April 1st for the Fall semester. Pharmacy students should express their interest in the Pharm.D./MPH Joint Degree program during the first professional year of study and seek the advice and direction of the faculty member in the Department of Pharmaceutical Outcomes and Policy who serves as Program Coordinator for the Joint Degree curriculum with the MPH program. Students should maintain regular contact with the Program Coordinator in the College of Pharmacy. The support and endorsement of the Department of Pharmaceutical Outcomes and Policy for the student's application is required.

### **Faculty Advisor**

Each student in the Pharm.D./MPH Joint Degree program is assigned a faculty advisor within the College of Pharmacy and within the College of Public Health & Health Professions. The faculty advisor will provide mentoring, monitor academic progress, and provide guidance in development and conduct of a special project.

### **MPH Internship Requirement**

The concepts presented via coursework are integrated and assimilated through an internship, which provides an opportunity for each student to apply his or her knowledge in a practice setting. A wide range of settings and opportunities may be suitable for an internship. Each internship is individually tailored to assure competence in general MPH and concentration-specific skills and to meet student goals, concentration criteria, and the needs of the agencies involved. The internship is usually completed in the student's final term in the MPH year in the program, and always includes a special project that serves as the basis for a final oral and written report. The internship and the special project must be approved by the MPH internship coordinator and the student's MPH faculty advisor.

#### **MPH Culminating Experience**

Students attain a depth in public health knowledge and skills by selecting one core area for their concentrations. They obtain a broad knowledge base of public health issues and perspectives through the MPH core courses and electives. The concepts presented in these courses are integrated and assimilated through the internship, which provides an opportunity for each student to apply his or her knowledge in the real world of public health. Students may engage in many activities during an internship. However, each student must have one special project which serves as the basis for a major paper and a presentation. These final activities of the MPH program are intended to encourage students to understand their projects in the larger context of public health as a cross-disciplinary field and in relation to the competencies expected of all MPH graduates. Student presentations are scheduled on one or two Public Health Days near the end of fall, spring and summer semesters. The written paper and oral presentation constitute a culminating experience for the MPH.

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# DOCTOR OF PHARMACY DEGREE PROGRAM

First Professional Year	
Fall Semester	Credits
BCH 5451 Clinical Biochemistry	4
PHA 5100 Dosage Forms I	3
PHA 5560C Physiological Basis of Disease I	5
PHA 5727 Introduction to Pharmacy Health Care	3
PHA 5433 Fundamentals of Medicinal Chemistry	1
PHA 5941C Introductory Pharmacy Practice Experience I	1
Total	17
Spring Semester	
PHA 5101 Dosage Forms II	2
PHA 5436 Structure and Function of Nucleotides	2
PHA 5561C Physiological Basis of Disease II	5
PHA 5752 Microbiology & Immunological Basis of Therapeutics	4
PHA 5781 Pharmacotherapy I	2
PHA 5515 Basic Principles of Pharmacology	1
PHA 5942C Introductory Pharmacy Practice Experience II	1
Total	18
Second Professional Year	
Fall Semester	
PHA 5782 Pharmacotherapy II	5
PHA 5437 Medicinal Chemistry I	3
PHA 5516 Pharmacological Basis of Therapeutics I	4
PHA 5127 Dose Optimization I	2
PHA 5719 Introduction to Quantitative Methods in Pharmacy*	3
PHA 5943C Introductory Pharmacy Practice Experience III	1
Total	18
Spring Semester	
PHA 5783 Pharmacotherapy III	5

PHA 5438 Medicinal Chemistry III	3
PHA 5517 Pharmacological Basis of Therapeutics II	4
PHA 5742C Professional Communications in Pharmacy Practice*	2
PHA 5128 Dose Optimization II	2
PHA 5944C Introductory Pharmacy Practice Experience IV	1
Total	17
MASTER OF PUBLIC HEALTH DEGREE PROGRAM	
Third Professional Year	Credits
Summer Semester	6
Fall Semester	12
Spring Semester	12
Summer Semester (Final Internship)	6
Total	36
PharmD/MPH students choose one of the MPH concentrations and follow the curriculum to identify appropriate courses. Joint degree students may take up MPH core courses online.	
DOCTOR OF PHARMACY DEGREE PROGRAM	
Fourth Professional Year	
Fall Semester	
PHA 5784 Pharmacotherapy IV	3
PHA 5226 Evidenced- Based Pharmacy*	4
PHA 5103 Dosage Forms in Contemporary Practice	2
PHA 5113 Personalized Medicine	2
PHA 5104L Pharmaceutical Skills Laboratory I	2
PHA 5239 Pharmacy Law & Ethics*	3
Total	16
Spring Semester (First 8 weeks)	

3

1

PHA 5787 Pharmacotherapy V

PHA 5105L Pharmaceutical Skills Laboratory II

PHA 5267 Critical Appraisal of Pharmacoeconomic Studies	
Pharmacy elective**	2
(Second 8 weeks)	
PHA 5000 Advanced Pharmacy Practice Experience Rotations***	8
Total	17
Summer Semester	
PHA 5000 Advanced Pharmacy Practice Experience Rotations ***	12
Fifth Professional Year	
Fall Semester	
PHA 5000 Advanced Pharmacy Practice Experience Rotations ***	16
Spring Semester (First 8 weeks)	
PHA 5000 Advanced Pharmacy Practice Experience Rotations ***	8
(Second 8 weeks)	
PHA 5788 Pharmacotherapy VI	2
PHA 5352 Herbal Medicines	2
Pharmacy electives**	4
Total	16

\*\*\* An internship and special project (5-8 credits) plus a 1credit seminar course is required for the MPH degree. The special project will be determined by the emphasis area selected. The exact project will be determined by the student with faculty advisor input and approval. The special project can be completed in the experiential phase of the Doctor of Pharmacy program. Please consult your MPH Student Handbook, faculty advisor, and internship coordinator for details on completing your internship and special Project requirements. Special clerkships in areas that emphasize public health issues and principles can be arranged.

Required final total credits for the Doctor of Pharmacy degree program = 146

Total credits for the MPH degree = 48

Dual counted credits = 6 credits for the special project and up to 6 credits of pharmacy

<sup>\*</sup>May be applied to the MPH program.

<sup>\*\*</sup>Six credits of Pharmacy electives may be applied to the MPH program.

coursework as specified above may count toward the MPH degree.

The time frame for the PharmD/MPH combined degree program is five academic years of professional coursework inclusive of two summer semesters.