

SIMMONS COLLEGE
and
THE MASSACHUSETTS COLLEGE OF PHARMACY AND HEALTH SCIENCES

DUAL DEGREE IN CHEMISTRY AND PHARMACY

INTRODUCTION

Simmons College and the Massachusetts College of Pharmacy and Health Sciences (MCPHS) collaborate in offering a 7 year dual major (dual degree) for Simmons students leading to the B.S. degree in Chemistry from Simmons and the PharmD degree from MCPHS. This program is of interest to students who want both the scientific preparation necessary for doing research in the pharmaceutical industry and the professional training leading to licensure in pharmacy.

THE DUAL MAJOR PROGRAM

The curriculum detailed below begins with three full years at Simmons. In the second semester of her third year, a student enrolls for the three-credit course, Health Care Delivery, at MCPHS, and follows the normal MCPHS transfer procedures. In the fourth year, eight semester hours of senior research plus seminar are carried out at Simmons, and an almost full load of course work in pharmacy is started at MCPHS. The fifth and sixth years are spent entirely at MCPHS, and the pharmacy curriculum is completed in the seventh year with 36 weeks of experiential education. Students complete all of the degree requirements for each institution, except total credit hours. Neither degree is awarded until the entire program has been completed. At the end of the seventh year, a student receives a B.S. in chemistry from Simmons, and a Doctor of Pharmacy (PharmD) from MCPHS. State licensing examinations are generally taken in the summer following graduation.

ADMISSION TO THE PROGRAM

Simmons first-year and second-year students who are already following or plan to follow an appropriate program in the natural sciences are eligible to be considered for dual degree candidacy.

MCPHS will accept up to four qualified Simmons students each year into the third year of the Pharmacy Program, provided they meet the following requirements: (a) overall grade point average of 3.2 and science and math grade point average of 3.2 (on a scale of 4.0), with no grade less than C (not C-) and no repeats on the coursework listed on page 2; (b) an official TOEFL score of 213 or above (computer exam) or 81 or above (Internet exam) if English is not their native language. Students apply for admission to MCPHS via the online PharmCAS system, preferably in early November and no later than February 1 of their third year at Simmons. Although MCPHS agrees to give preference to qualified Simmons students at a given GPA level, it is their right to determine the final suitability of a student for entry into the PharmD program.

ADVISEMENT

A faculty member in the Chemistry Department at Simons serves as advisor to Simmons dual degree students during the first three years of their program. Upon matriculation at MCPHS in the fourth year, students will be assigned an advisor at MCPHS. There are defined avenues of communication between Simmons College and MCPHS regarding admission and curricular questions. Informal meetings with a representative from MCPHS will be arranged from time to time before a student formally transfers to MCPHS.

THE CURRICULUM

The dual major is possible because most of the prerequisites for the chemistry major and the professional pharmacy program are the same. Although it is almost impossible to ensure course-by-course correspondence, the total number of hours in the humanities and social/behavioral sciences obtained by Simmons students in the program equals or exceeds that of regular MCPHS students.

In the course listing below, all Simmons courses are valued at 4 semester hours credit as shown. The normal annual course load is 32 semester hours at Simmons and 32-36 semester hours at MCPHS. Courses shown in **boldface** are taken at MCPHS.

YEAR ONE (Simmons)

Chemistry 113 or 111 (General)
Biology 113 (General)
Math 120 (Calculus I)
Multidisciplinary Core Course I

Chemistry 114 (Organic I)
Biology 218 (Principles of Zoology)
Math 121 (Calculus II)
Multidisciplinary Core Course II

YEAR TWO (Simmons)

Chemistry 225 (Organic II)
Physics 112 (Fundamentals)
Psychology 101 (Intro)
Elective (Am.History/PoliSci)

Chemistry 226 (Quantitative Analysis)
Physics 113 (Fundamentals)
Biology 221 (Microbiology)
Language

YEAR THREE (Simmons/MCPHS)

Chemistry 331 (Physical)
Chemistry 345 (Biochemistry)
Economics 101 (Macro)
Elective (Mode 1/Humanities)

Chemistry 332 (Physical)
Math 118 (Statistics)
Elective (Mode 2)
Elective (Psychology – PSYC235 recommended)
Elective (Social Science – 200 level or higher)

YEAR FOUR (MCPHS/Simmons)

Chemistry 355 & 390 (Research & Seminar)

Chemistry 355 & 390 (Research & Seminar)

Physiology I	3
Intro. to Practice Management	2
Pharmaceutics I	4
IPEP I (with pre-lab)	1
Health Care Delivery	3
TOTAL	13
(17 credits with Simmons work)	

Biochemistry II	3
Physiology II	3
Pathophysiology	3
Pharmacokinetics I	2
Pharmaceutics II	3
Pharmaceutics Lab	1
TOTAL	15
(19 credits with Simmons work)	

YEAR FIVE (MCPHS)

Medicinal Chemistry I	3	Medicinal Chemistry II	3
Pharmacology I	4	Pharmacology II	4
Pharmacokinetics II	3	Virology & Anti-infectives	4
Pharmacoepidemiology	2	OTC Drugs/Self Care	2
IPEP II	1	Drug Literature Evaluation	2
Interpersonal Communication	3	IPEP III*	1
TOTAL	16	TOTAL	16

*Taken the summer after Year 5 (3 week intensive)

YEAR SIX (MCPHS)

Disease State Management I	6	Disease State Management II	6
Pharmacotherapeutics Seminar I	1	Pharmacotherapeutics Seminar II	1
Professional Elective	3	Advanced Practice Management II	2
Pharmacy Law	2	Professional elective	3
Advanced Practice Management I	2	IPEP IV	1
Clin. Toxicology & Substance Abuse	2	Health Care Ethics	3
TOTAL	16	TOTAL	16

YEAR SEVEN (MCPHS)

36 sem. hrs. (six 6-week rotations / 40 hrs/week):

Required: Inpatient Medicine, Institutional Pharmacy Practice, Ambulatory Care, Community Pharmacy Practice

Electives: Administration, Cardiology, Critical Care, Drug Information, Emergency Medicine, Gastroenterology, Home Health Care, Infectious Disease, Neonatology, Nephrology, Neurology, Oncology/Hematology, Obstetrics/Gynecology, Pediatrics, Poison Information, Psychiatry.

CREDIT SUMMARY: TOTAL 234 semester hours for the two degrees.

Simmons: 108 semester hours (128 normally required for graduation)

MCPHS: 128 semester hours (201 normally required for graduation, of which 130 are in the professional sciences and experiential education)

NOTES:

- (1) MCPHS requires that the first three years of college work for students in this program must be completed at Simmons College. Students requiring more than one course to fulfill the Simmons Foreign Language requirement may need to do summer work. In special cases, a limited amount of coursework from other accredited 4-year colleges/universities may be accepted on a case-by-case basis. Such coursework must be approved **in advance** by both Simmons at MCPHS (and will not be approved retroactively). Transfer credit from 2-year institutions will not be accepted for admission to the PharmD program at MCPHS.
- (2) Simmons courses shown as elective must be chosen to fulfill the Modes of Inquiry requirements. The Mode 1 elective may also be taken during the Fall Semester of Year 4.

- (3) Dual degree candidates fulfill all the degree requirements for the Chemistry B.S. at Simmons (other than total credits), except for Calculus III and one advanced chemistry elective.
- (4) Work done at Simmons fulfills, as a package, all the general education, basic sciences, and non-professional elective requirements of MCPHS.
- (5) All courses in the professional sciences required for the PharmD are taken at MCPHS except Biochemistry I which is taken at Simmons.
- (6) The medical terminology competency examination is required of all dual majors prior to taking Pathophysiology. This requirement also may be met through a 1-credit medical terminology course offered at MCPHS in the spring.

(Approved by MCPHS and Simmons College November 2007)