

CURRICULUMS

ENTRY LEVEL DOCTOR OF PHARMACY CURRICULUM

Professional Requirements

The entry-level PharmD curriculum includes required sequences of coursework in physiology, pharmaceuticals and drug delivery systems, medicinal chemistry, biopharmacy, pharmacy practice, pharmacology, pathophysiology and therapeutics, clinical pharmacokinetics, and pharmacy management. Additional courses relating to biotechnology and jurisprudence are also required. Course pedagogical techniques include lectures, laboratories, recitations, case conferences, workshops, and Professional Experience Program rotations precepted by clinical faculty within ambulatory and inpatient practice sites. A thread of experiential activities, beginning in the first year, reinforces the didactic component of the curriculum, culminating in full-time advanced practice experiences in the final year. A minimum of 10 hours of professional electives are also required. The required coursework for the entry-level PharmD program and scheduling sequences are outlined below.

Required First-Year Courses

Pharmacy 601 (Biopharmacy I)

Pharmacy 602 (Biopharmacy II)

A two-course sequence which provides the fundamental background in modern molecular life science required for pharmacy studies.

Pharmacy 605 (Medicinal Chemistry I)

An introduction to functional group properties of importance to drugs, heterocycles, acidity and basicity, metabolism, prediction of ionization constants and physicochemical properties of drugs. Chemical and biochemical principles governing the properties of drugs. Drug categories include: Drugs affecting the central nervous system.

Pharmacy 606 (Medicinal Chemistry II)

Chemical and biochemical principles governing the properties of drugs. Drug categories include: Anti-hypertensive agents, antilipidemic agents, anticoagulants, and antihistamines.

Pharmacy 607 (Medicinal Chemistry III)

Chemical and biochemical principles governing the properties of drugs. Main focus will include the chemotherapy of cancer and infectious diseases.

Pharmacy 621 (Drug Delivery I)

Principles that govern the design and use of solution dosage forms, including physicochemical properties, ionization, solubility, and stability.

Pharmacy 622 (Drug Delivery II)

Routes of drug administration and the physiologic and physicochemical factors that influence drug penetration, absorption, and bioavailability.

Pharmacy 623 (Drug Delivery III)

Application of physicochemical principles to the design, formulation, manufacture, and use of colloids, suspensions, emulsions, solid and topical drug delivery systems.

Pharmacy 624 (Pharmaceutical Calculations)

Introduction to prescription terminology and pharmaceutical calculations: emphasis on measurement systems, conversions, percent preparations, units of concentrations, calculation of doses, dilutions, milliequivalents, and milliosmoles.

Pharmacy 661 (Pharmacy Practice I)

The first in a three-course sequence covering concepts fundamental to pharmacy practice. Topics include orientation to the profession, history, ethics, communications, and jurisprudence.

Pharmacy 662 (Pharmacy Practice II)

The second in a three-course sequence covering concepts fundamental to pharmacy practice with a focus on techniques used to search and evaluate the medical and pharmaceutical literature.

Pharmacy 664 (Introductory Pharmacy Practice Experience)

Introductory experiences in pharmacy practice including hospital pharmacy, community health activities, geriatric assignments and professional activities. Students also explore potential career options.

Pharmacy 673 (Pharmacy Practice Management I)

The first in a three-course pharmacy practice management sequence. This course covers the medication use system and resource management.

Physiology and Cell Biology 601

Physiology and Cell Biology 602

A two-course sequence concerning organ system physiology.

Required Second-Year Courses

Pharmacy 710 (Pharmaceutical Biotechnology I)

Products of biotechnology used as drugs, with an emphasis on immunoactive biomacromolecules employed in prevention, diagnosis and therapy of infectious, allergic, immunodeficiency and other diseases.

Pharmacy 711 (Pharmaceutical Biotechnology II)

Products of biotechnology used as drugs, with an emphasis on antibiotics, anti-cancer agents and other important natural products employed in disease therapy.

Pharmacy 731 (Clinical Pharmacokinetics I)

Pharmacy 732 (Clinical Pharmacokinetics II)

Pharmacy 733 (Clinical Pharmacokinetics III)

A three-course sequence in clinical pharmacokinetics and pharmaco-dynamics and their application to pharmacotherapy.

Pharmacy 747 (Pharmacology I)

Pharmacy 748 (Pharmacology II)

Pharmacy 749 (Pharmacology III)

The first three offerings in a six-course sequence providing a comprehensive study of the therapeutic effects, pharmacodynamics, mechanistic actions, and toxicological effects of important drug classes.

Pharmacy 774 (Professional Practice Laboratory I)

The first in a three-course professional practice laboratory sequence. Topics include use of instruments/references, interpretation of prescription orders, solubility, dissolution, solutions, suspensions, and emulsions.

Pharmacy 775 (Professional Practice Laboratory II)

The second in a three-course professional practice laboratory sequence. Topics include semisolids in rectal and vaginal preparations, powders, capsules, ophthalmic preparations, and sterile dosage forms.

Pharmacy 776 (Professional Practice Laboratory III)

The third in a three-course professional practice laboratory sequence. Topics include cancer chemotherapy, radioisotopes, immunoassay techniques, total parenteral nutrition, and individualized projects.

Pharmacy 777 (Pathophysiology and Therapeutics I)

The first in a six-course sequence in pathophysiology and pharmacotherapy. Development of patient assessment and problem solving skills to construct therapeutic plans.

Pharmacy 778 (Pathophysiology and Therapeutics II)

The second in a six-course sequence in pathophysiology and pharmacotherapy. Cardiovascular and renal disorders.

Pharmacy 779 (Pathophysiology and Therapeutics III)

The third in a six-course sequence in pathophysiology and pharmacotherapy. Psychiatric and other central nervous system disorders.

Required Third-Year Courses

Pharmacy 724 (Clinical Pharmacogenomics)

Principles and techniques necessary to understand the role of genetic variation in the pharmacokinetics of drugs and therapeutic management of disease.

Pharmacy 750 (Pharmacology IV)

Pharmacy 751 (Pharmacology V)

Pharmacy 752 (Pharmacology VI)

The last three offerings in a six-course sequence providing a comprehensive study of the therapeutic effects, pharmacodynamics, mechanistic actions, and toxicological effects of important drug classes.

Pharmacy 763 (Nonprescription Therapeutics)

An overview of non prescription therapeutics with a focus on patient assessment, product recommendations and patient care plans.

Pharmacy 780 (Pathophysiology and Therapeutics IV)

The fourth in a six-course sequence in pathophysiology and pharmacotherapy. Endocrine, hematologic, respiratory, and immunologic.

Pharmacy 781 (Pathophysiology and Therapeutics V)

The fifth in a six-course sequence in pathophysiology and pharmacotherapy. Infectious diseases, bone and joint, obstetric/gynecologic, and genitourinary disorders.

Pharmacy 782 (Pathophysiology and Therapeutics VI)

The sixth in a six-course sequence in pathophysiology and pharmacotherapy. Oncologic, fluid and electrolyte, gastrointestinal, nutritional, pediatric, and multi-system disorders.

Pharmacy 784 (Intermediate Pharmacy Practice Experience)

Experiential activities in community pharmacies and ambulatory clinics that focus on skills necessary for advanced practice rotations (i.e. Pharmacy 799). Students also engage in community health activities and complete training in CPR, immunization administration, and diabetes screening.

Pharmacy 786 (Pharmacy Practice Management II)

The second in a three-course sequence in pharmacy practice management. This course covers the medication use system and resource management.

Pharmacy 788 (Pharmacy Practice Management III)

The third in a three-course sequence in pharmacy practice management. This course covers the economic evaluation of pharmaceutical services and pharmacoepidemiology.

Pharmacy 790 (Pharmaceutical Jurisprudence)

A study of the laws and regulations relating to the practice of pharmacy.

Required Fourth-Year Courses

Pharmacy 799 (Advanced Pharmacy Practice Experience)

Advanced experience in pharmacy practice including community ambulatory, institutional and elective settings.

Pharmacy 693 (Community Health and Professional Activities)

SUMMARY OF ENTRY LEVEL DOCTOR OF PHARMACY CURRICULUM

Note: The curriculum is subject to change. This summary only includes required courses; students must also schedule a minimum of 10 hours of professional electives.

YEAR 1: Autumn

Physiology 601
Med Chem I
Biopharmacy I
Drug Delivery I
Pharm Pract I
Intro Pract Exper

5 hr
3 hr
3 hr
3 hr
3 hr
1 hr

Winter

Physiology 602
Med Chem II
Biopharmacy II
Drug Delivery II
Pharm Pract II
Intro Pract Exper

5 hr
3 hr
3 hr
3 hr
3 hr
1 hr

Spring

Pharm Calc
Med Chem III
Drug Delivery III
Management I
Intro Pract Exper

5 hr
3 hr
3 hr
3 hr
3 hr
1 hr

1 hr
5 hr
4 hr
3 hr
1 hr

YEAR 2: Autumn

Kinetics I
Pharmacology I
Therapeutics I
Practice Lab I
Biotechnology I

4 hr
3 hr
5 hr
3 hr
2 hr

Winter

Kinetics II
Pharmacology II
Therapeutics II
Practice Lab II

4 hr
3 hr
4 hr
3 hr

Spring

Kinetics III
Pharmacology III
Therapeutics III
Practice Lab III
Biotechnology II

4 hr
3 hr
4 hr
3 hr

3 hr
3 hr
4 hr
3 hr
2 hr

YEAR 3: Autumn

Pharmacology IV
Therapeutics IV
Management II
Nonprescrip Therap.
Intermed Pract Exp

3 hr
4 hr
3 hr
3 hr
1 hr

Winter

Pharmacology V
Therapeutics V
Pharmacogenomics
Intermed Pract Exp

3 hr
4 hr
3 hr
1 hr

Spring

Pharmacology VI
Therapeutics VI
Management III
Jurisprudence
Intermed Pract Exp

3 hr
4 hr
3 hr
1 hr

3 hr
5 hr
3 hr
3 hr
1 hr

YEAR 4: Autumn

Advanced Pract Exp 10 hr
Advanced Pract Exp 10 hr

Winter

Advanced Pract Exp 5 hr
Advanced Pract Exp 5 hr
Advanced Pract Exp 5 hr

Spring

Advanced Pract Exp 5 hr
Advanced Pract Exp 5 hr
Comm Health & Prof Activ 2 hr

PHARM D EXPERIENTIAL PROGRAM

Description

The PharmD Program includes three years of pharmacy practice experiences during the four-year program. These courses are coordinated by the Professional Experience Programs (a.k.a. Experiential Program) Office.

The experiential program is based on the philosophy and process of pharmaceutical care; therefore, the program is intended to foster the development of skills related to the provision of direct care to patients. Also, the experiential program provides structured activities for students that reinforce the didactic classroom education occurring throughout the PharmD program.

Students enrolled in the experiential courses must:

- Be licensed Ohio interns
- Complete health requirements (see below)
- Be covered by professional liability insurance facilitated by the program
- Not have a family member or spouse as a preceptor
- Not receive monetary remuneration
- Complete a criminal background check by the deadline specified by the program

Professional Experience Programs Contacts:

PH799 and experiential program-

Gerald L. (Jerry) Cable, Director, at cable.1@osu.edu and 292-2492

PH784, PH664, and documentation-

Thallia Blight, Associate Program Coordinator, at blight.3@osu.edu and 247-8691

Year One: Pharmacy 664

Pharmacy 664 is a three-quarter sequence of experiences that enhance and complement first-year professional coursework. The experiential education team works in cooperation with faculty teaching didactic courses, especially Pharmacy 661, 662 and 663. In addition, Pharmacy 664 activities are planned to provide a foundation for attitudes and skills that will be applied during the progression of professional experiences in the professional practice laboratory (Pharmacy 774, 775, 776), intermediate practice experiences (IPPE, Pharmacy 784) and full-time, advanced practice experiences (APPE, Pharmacy 799). The required hours (i.e. contact time) for Pharmacy 664 activities during year one of the Graduate Professional Doctor of Pharmacy program are a **minimum of 160.**

Students:

- ☞ Engage in appropriate, introductory activities with pharmacy practitioners/mentors in community and institutional settings.
- ☞ Develop questioning and listening communication skills that are foundational for:
 - Gathering information and problem solving;
 - Understanding patients and their environments;
 - Working with health-care professional colleagues.
- ☞ Continue process of reflective career planning using the *APhA Vigilant Decision-Making Process*.
- ☞ Reflect and apply knowledge acquired in didactic pharmacy courses to pharmacy practice.
- ☞ Perform all activities professionally in concordance with:
 - The Ohio State University College of Pharmacy Honor Code
 - Pharmacist Code of Ethics and Oath of A Pharmacist
 - State of Ohio Internship Regulations
- ☞ Engage in group and individual service-learning activities that:
 - Promote safe medication usage, health improvement, wellness, and disease prevention in cooperation with patients, communities, at-risk populations;
 - Expands students understanding of the aging process and related geriatric issues;
 - Exposes students to other cultures and increases awareness and respect for other peoples' values and beliefs.
 - Enhances skills needed to function on a team.

- ☛ Engage in professional activities including but not limited to etiquette dinner, College career fair, professional pharmacist association events, professional advocacy, etc.

Year Three: Pharmacy 784

Pharmacy 784 is a three-quarter sequence of experiences that build on coursework in the second year of the program and enhance/complement third-year professional coursework. As appropriate, the experiential education team works in cooperation with faculty teaching didactic courses. In addition, Pharmacy 784 activities are planned to provide a foundation for attitudes and skills that will be applied during the full-time, advanced practice experiences (APPE, Pharmacy 799). The required hours (i.e. contact time) for Pharmacy 784 activities during year one of the Graduate Professional Doctor of Pharmacy program are a **minimum of 160.**

Students:

- ☛ Engage in patient care at:
 - An ambulatory clinic
 - In community health environments
 - At a community pharmacy
- ☛ Engage in medication safety activities by applying knowledge obtained from the management course series to a medication error prevention team project in a hospital practice setting.
- ☛ Provide healthcare services in a clinic serving an economically and ethnically diverse patient population
 - Somali, Latino, African American, U.S. born citizens, etc.
 - Employ a variety of resources for payment (i.e. uninsured, underinsured, Medicare, Medicaid, private payment).
- ☛ Receive evaluations by trained preceptors of a defined skill set related to pharmacy practice, including but not limited to prescription and OTC medication counseling, inhaler use, use of a blood pressure measuring device, etc.
- ☛ Complete journal entries related to their experiences in the various practice settings.
- ☛ Perform all activities professionally in concordance with:
 - The Ohio State University College of Pharmacy Honor Code
 - Pharmacist Code of Ethics and Oath of A Pharmacist
 - State of Ohio Internship Regulations
- ☛ Engage in professional activities including but not limited to, professional pharmacist association events, professional advocacy, etc.

Year-Four: Pharmacy 799

Pharmacy 799 is the course number for the series of advanced practice pharmacy experiences (APPE) in The Ohio State University College of Pharmacy Entry-Level Pharm.D. Program. Students in the program are assigned to a minimum of nine (9) calendar months of APPE during the fourth academic year between July 1st and May 31st of the following year. During the academic year, a minimum of twenty (20) hours of activities outside of the professional experience assignments is required during the 4th year of the program (i.e. during PH 799). The student receives PH693 credit for these activities. This includes 10 hours of community health activities and 10 hours of professional development

The placement of students with a preceptor at a site is a ***collaborative process*** involving the student, Director of Professional Experience Programs, and clinical faculty preceptors. The Director of Professional Experience Programs assigns students to Pharmacy 799 training sites. The assignments are made based on the following process and policy;

- A series of group and individual meetings with students by the program director during autumn quarter of the 3rd professional year.
- Student review of personal/professional goals.
- The completion of a site preference list by the student.
- Preceptor availability and acceptance of the placement by the preceptor.

Student information, preceptor information and practice experience descriptions are maintained on the College Experiential Website [www2.pharmacy.ohio-state.edu/osudb].

Internships

The Ohio State Board of Pharmacy grants internship credit to students completing academic experiential courses (i.e., Pharmacy 664, Pharmacy 784 and Pharmacy 799) when the student follows the usual procedure of:

- First-year PharmD students must apply for and obtain a pharmacy intern license by November 1 of their first year.
- Students enrolled in PH784 and PH799 must renew their pharmacy intern license by the deadline given by the Ohio Board of Pharmacy.
- Students enrolled in PH799 with experiential rotations outside Ohio shall obtain intern licensure if required by that state's Board of Pharmacy.
- Students enrolled in PH799 will carefully maintain an *OSU College of Pharmacy PH799 Academic Experience Affidavit*, to be submitted to the Experiential Program office by the end of Spring quarter their fourth year.

Students may also obtain credit for hours in a pharmacy workplace setting. They should consult the Ohio Board of Pharmacy website for more information and forms. The internship forms are available on the Ohio State Board of Pharmacy web site at <http://www.state.oh.us/pharmacy> (Ohio State Board of Pharmacy, 77 S. High Street, Room 1702, Columbus, Ohio 43215-6126; phone: 466-4143).

Health Requirements for Experiential Coursework

- Students may obtain vaccinations and tests from any licensed healthcare provider including the OSU Student Health Center, personal physician, their workplace if appropriate, or local health department.
- Documentation of all vaccinations and health history should be submitted to 204 Parks Hall in person or by mail.
- Questions regarding health documentation can be directed to the Professional Experience Programs office in 204 Parks Hall (247-8691, blight.3@osu.edu).

Students shall provide information about their vaccination history by submitting a completed *Health Prerequisites Summary Form* by the appropriate deadline. *Beginning with the PharmD Class of 2012, students must include copies of their medical records showing the tests and vaccinations.*

Disease	Documentation
Chicken Pox (Varicella)	A positive titer or history of two vaccinations is required of all incoming P1 students, regardless of previous history of disease.
Hepatitis B	History of three vaccinations or positive titer.
Measles, Mumps, Rubella (MMR)	History of two vaccinations or positive titer.
TB (PPD) Skin Test	Results of a negative reading since May of the current year.
Tetanus	Vaccination within 10 years required.

The College also recommends (but does not require) that students obtain annual influenza vaccinations.

Varicella Titer: This blood test confirms that a person has an active immunity to the Chicken Pox virus. It is required of all students regardless of previous personal history of the disease.

- Students who work in a clinical setting where the titer was required may submit appropriate documentation.
- A student who has a negative result for the titer is required to complete a series of two vaccinations.
- Students who have been vaccinated may provide documentation of the series of two vaccines.

Hepatitis B

P1 students must have completed at least the first vaccination in a series of three by the start of Autumn quarter their first year. The entire series must be completed by May 30 of their first year.

TB Skin Tests

- All students must have a current negative skin test prior to beginning PH664, PH784 or PH799. The test should be completed since May of the current year and by the deadline specified.
- Students may provide documentation from their workplace if a TB skin test is required there. It is the student's responsibility to provide us with updated documentation after each test.
- If a student is overdue for a TB skin test upon placement at a particular site, the student must have a test done before they can start the rotation.

TB Skin Tests with Positive Results

If the test was positive, a chest x-ray should be performed. The student shall provide documentation of the x-ray results. If the chest x-ray was positive, documentation of appropriate treatment must be provided. Students who had a positive test result shall be asked to complete a confidential survey during the first week of classes.

COMBINED DEGREE PROGRAMS (PHARMD)

Combined degree programs are available for PharmD/MS, PharmD/PhD, PharmD/MBA, and PharmD/MPH. These programs provide the opportunity for selected students to complete both degree requirements within a shorter timeframe than completing each separately. Students wishing to combine the PharmD curriculum with coursework for a Master's or PhD degree in pharmacy should contact Student Affairs (150 Parks Hall) or Graduate Education (217E Parks Hall; William Hayton, Associate Dean for Graduate Programs and Research; Kathy Brooks, Administrative Assistant) for assistance. These programs are individualized by Division (Medicinal Chemistry and Pharmacognosy, Pharmaceutics, Pharmacology, Pharmacy Practice and Administration, and Translational Science). Interested students may wish to speak with faculty members from the various academic divisions as well.

Students interested in the PharmD/MBA or PharmD/MPH will typically apply for the MBA or MPH component during their third year in the PharmD program. Students must be independently admitted to the college offering the degree they wish to pursue. The general curricular structure for these combined degree offerings follows:

Years 1-3	<ul style="list-style-type: none"> • Regular PharmD classes.
Year 4	<ul style="list-style-type: none"> • Full-time MBA/MPH classes.
Year 5	<ul style="list-style-type: none"> • Completion of Advanced Practice Experience Rotations for the PharmD. • Part-time engagement in MBA or MPH activities. (Note: When students are engaged in a combination of PharmD and MBA/MPH coursework, they will pay the higher tuition of the two.)

Enrollment in these combined degree programs may be limited. Additional information is available at www.fisher.osu.edu (MBA) or www.sph.osu.edu (MPH).

PROFESSIONAL ELECTIVES

The following lists were compiled through input from faculty in the College of Pharmacy and current PharmD students. It contains courses taken by current and past PharmD students. The PharmD Program Committee continues to explore other elective options and invites input to these lists. Please contact Sylvan Frank at frank.1@osu.edu or Heather Deters at deters.12@osu.edu to make a suggestion.

Please be advised that this is only a list of possible courses. Students still need to meet with their faculty advisor to have these or other courses approved as a program elective prior to actually taking the courses. Courses and times offered are subject to change at any time.

Professional Electives By Course Number

Course Number

Accounting 211 (5) SU, AU, WI, SP
 Accounting 310 (5)* SU, AU, WI, SP
 Ag Education 885 (3) SU
 Ag Education 886 (3) SU
 Ag Education 887 (3) AU, SP
 Allied Medicine 601 (4) AU, WI, SP
 Allied Medicine 632 (2) SU
 Allied Medicine 635 (3) WI
 Allied Medicine 641 AU, WI, SP
 Allied Med (3) 667 SP
 Allied Medicine 700.01 (3) WI
 Allied Medicine 700.03 (3) AU
 Allied Medicine 700.04 (3) WI
 Allied Med 720 (3) AU

Course Title

Introduction to Accounting
 Foundations of Accounting
 Research Methods
 Research Design
 Analysis and Interpretation of Data
 Death, Loss, & Grief from Multiple Perspectives
 Diabetes Care and Management
 Allied Health Professional Clinical Interviewing
 Medical Communic with Latinos (Spanish Prof)
 Aging and Public Policy
 Interprofessional Care
 Ethical Issues
 Interprofessional Seminar in Clinical Practice
 Aging and Design

Biostatistics 318 (5) SU
 Business Admin: Finance 220 (4) SU, AU, WI, SP
 Business Finance 420 (4)* SU, AU, WI, SP
 Business MHR 400 (4)* AU, WI, SP
 Business MHR 494 (1-10) SU, AU, WI, SP
 Business MGT 430 (4)* AU, WI, SP
 Business M&L 450 (4)* AU, WI, SP
 Comparative Studies 204 (5)
 Comparative Studies 305 (5)
 Economics 200 (5) SU, AU, WI, SP
 EDU PAES 612 (3)
 EDU PAES 702 (3)
 EDU PAES 703 (3)
 English 304 (5)
 English 305 (3)
 HDFS 670.01 (3) SU, WI
 HIMS 525 (3) AU
 History 561 (5)
 History 562 (5)
 HSMP 802 (4) WI
 HSMP 805 (4) SP
 HSMP 815 (4) AU
 HSMP 840 (4) WI
 HSMP 845 (3)
 Human Nutrition 310 (5) AU, WI, SP
 Medical Dietetics 545 (4) AU
 Music 894.02 (3-5)
 Nursing 440 (3) AU, WI, SP
 Nursing N793 (3) SP
 Pharmacy 471 (2) AU
 Pharmacy 472 (2) WI
 Pharmacy 473 (2) SP
 Pharmacy 513.01 (3) AU
 Pharmacy 613 (1)
 Pharmacy 614 (2) SP
 Pharmacy 616 (3) AU
 Pharmacy 617 (2) AU
 Pharmacy 693 (1-5) SU, AU, WI, SP
 Pharmacy 694 (1-3) SU, AU, WI, SP
 Pharmacy 695 (2) AU
 Pharmacy 705 (2) SP
 Pharmacy 709 (3)
 Pharmacy 715 (2) SP
 Pharmacy 717 (3) WI
 Pharmacy 735 (3) SP
 Pharmacy 737 (5) SU
 Pharmacy 783 (2) WI
 Pharmacy 785 (2) WI
 Pharmacy 789 (5) SP
 Psychology 550 (4) SU, AU, WI, SP
 Psychology 551 (5) SU, AU, WI, SP
 Psychology 552 (3)
 Psychology 681 (5)
 Public Health 794 (2-5) SU, AU, WI, SP
 Sociology 630 (5)
 Social Work 700.03 (3) AU
 Speech & Hearing Science 714 (5)
 Speech & Hearing Science 716 (5)

Introduction to Biostatistics
 Personal Finance
 Foundations of Finance
 Foundations of Mgmt & Human Resources
 Group Studies
 Foundations of Operations Management
 Foundations of Marketing Management
 Literature, Science, and Technology
 Medicine and the Humanities
 Principles of Microeconomics
 Alcohol and Drug Education
 Health After 60
 Health Behavior Change in Adulthood & Later
 Business and Professional Writing
 Technical Writing
 Adult Development and Aging
 Org Analysis of Health Care Facilities
 History of American Science
 History of American Medicine
 Economic Analysis of Health Services
 Introduction to Health Policy
 Health Services Organization Management
 Disability Policy & Politics
 Managed Health Care Programs
 Fundamentals of Human Nutrition
 Human Nutrition and Dietetics
 Music in Older Adulthood
 Cultural Competence in Healthcare
 Palliative Care
 Concepts in PCOL I: Discovery of Drug Action
 Concepts in PCOL II: Literature
 Concepts in PCOL III: Therapeutic Frontiers
 History of Pharmacy Lecture
 Chemical Dependency
 Professional Ethics
 Med Apps Radionuclides Radiopharmaceuticals
 Clinical Pharmacy Research
 Individual Studies
 Group Studies – Various Topics in Pharmacy
 Seminar in Clinical Pharmacy Career Pathways
 Pharmacy-Based Cultural Comp in Health Care
 Health Literacy
 Pediatric Pharmacotherapy
 Palliative Care Pharmacotherapy
 Drug Discovery and Drug Design
 Advanced Pharmaceutical Analysis
 Community Pharmacy Practice Management
 Complementary Medicine
 Isolation Techniques in Research
 Psychology of Childhood
 Adolescence
 Psychology of the Adult Years
 Development and Psychopathology
 Group Studies
 Medical Sociology
 Ethical Issues
 Introduction to Sign Language Systems
 Intermediate Sign Language Systems

Speech & Hearing Science 718 (5)
Veterinary Medicine 564 (3) WI
Women's Studies 325 (5)

Advanced Sign Language Systems
Clinical Veterinary Therapeutics
Issues in Women's Health

**These five courses will complete the General Business Minor through Fisher College of Business.*

Professional Electives Grouped by Category

The following are professional electives grouped by category.

Please note: classes are subject to change.

Communications and Clinical Pharmacy

Pharmacy 695 (2) AU
Pharmacy 724 (3) SP
Pharmacy 783 (2) WI

Seminar in Clinical Pharmacy Career Pathways
Clinical Pharmacogenomics
Community Pharmacy Practice Management

Business Minor

Business Finance 420 (4) SU, AU, WI, SP
Business MHR 400 (4) AU, WI, SP
Business MGT 430 (4) AU, WI, SP
Business M&L 450 (4) AU, WI, SP
Accounting 310 (5) SU, AU, WI, SP

Foundations of Finance
Foundations of Mgmt & Human Resources
Foundations of Operations Management
Foundations of Marketing Management
Foundations of Accounting and MIS

Additional Business Focus Courses

Accounting 211 (5) SU, AU, WI, SP
Business MHR 494 (1-10)
English 304 (5)

Introduction to Accounting
Innovation & Entrepreneurship in Modern Business
Business & Professional Writing

Gerontology

SAGE (special cert. program)
 -Allied Med 790 (3) AU
 -Allied Med 791 (3) WI
Allied Med 720 (3) AU
HDFS 670.01 (3) SU, WI
Nursing 793 (3) SU, AU, WI, SP
Pharmacy 717 (3) WI
Pharmacy 694 (1-3)
EDU PAES 702 (3)
EDU PAES 703 (3)

Series in Applied Gerontology Education
Introduction to Gerontology
Case Studies in Clinical Gerontology
Aging and Design
Adult Development and Aging
Palliative Care and end of life
Pain Management and Palliative Care
Geriatrics
Health after 60
Health Behav Change in Adulthd & Later Years

Human Nutrition

Human Nutrition 310 (5) AU, WI, SP & 310D (5)
Medical Dietetics 545 (4) AU

Fundamentals of Human Nutrition
Human Nutrition and Dietetics

Pediatrics/Development

Psychology 550 (4) SU, AU, WI, SP
Psychology 551 (5) SU, AU, WI, SP
Psychology 552 (3) SP
Pharmacy 715 (2) SP

Psychology of Childhood
Adolescence
Psychology of the Adult Years
Pediatric Pharmacotherapy

Research

Agricultural Education 885 (3)
Agricultural Education 886 (3)
Agricultural Education 887 (3)
Pharmacy 617 (2) AU
Pharmacy 789 (5) SP

Research Methods
Research Design
Analysis and Interpretation of Data
Clinical Pharmacy Research
Isolation Techniques in Research

Distance Learning Courses as Professional Electives

Please note: classes are subject to change.

Autumn Quarter

Allied Med 630D (3)
Spanish 104D (5)

Management Principles for Health Professionals
Intermediate Spanish II

Winter Quarter

EDU PAES 635D (3)
Spanish 104D (5)

School Health Services
Intermediate Spanish II

Spring Quarter

EDU PAES 637D (3)
Human Nutrition 310D (5)
Pharmacy 614D (2)
Spanish 104D (5)
Allied Med 630D (3)

Health Agencies
Fundamentals of Human Nutrition
Professional Ethics
Intermediate Spanish II
Management Principles for Health Professionals

Summer Quarter

Allied Med 630D (3)
Nursing 440D (3)
Spanish 104D (5)

Managed Principles for Health Professionals
Cultural Competence in Health Care
Intermediate Spanish II

(updated 10/23/09)

BS IN THE PHARMACEUTICAL SCIENCES CURRICULUM

Description

The first two years of the BSPS curriculum prepares the student for more intensive pharmaceutical studies during the remaining years. In addition to program prerequisites, pharmacy core and program elective courses, the student must complete the university's General Education Curriculum (GEC) and free electives. [Note: See list of elective courses and BSPS requirements checklists in this manual.]

The following includes a brief description of the core course requirements:

Biology 113 & 114: General Biology

Chemistry 121, 122 & 123: General Chemistry

Chemistry 251, 252 & 253: Organic Chemistry

Chemistry 245 & 246 or 254 & 255: Organic Chemistry Laboratory. Either sequence is acceptable for completion of the BSPS curriculum; however, students planning graduate studies or medical school are advised to take the higher-level courses.

Math 150, 151 & 152: Math 150 is a course in Elementary Functions. Math 151 and 152 comprise a sequence in Calculus and Analytic Geometry.

Pharmacy 410: Introduction to Medicinal Chemistry

Pharmacy 420: Pharmaceutics I

Pharmacy 461 & 462: Biomedical Chemistry I and II

Pharmacy 480: Integrated Pharmacology

Pharmacy 411, 421, 481, Chemistry 211 & 221: These are laboratory classes that relate to pharmacy core courses in medicinal chemistry, pharmaceutics, pharmacology, and analytical chemistry. Each student must take at least two of the four lab courses.

Pharmacy 515: Pharmaceutical Distribution and Health Care Systems

Physics 111, 112 & 113 or 131, 132 & 133: General Physics (Algebra based) or Introductory Physics (Calculus based). Either sequence is acceptable for completion of the BSPS curriculum; however, students planning graduate studies are advised to take the higher-level courses.

Physiology 311 & 312 or EEOB 232: These courses must be completed prior to taking Pharmaceutics and Pharmacology. Physiology 311 is typically offered Autumn Quarter and 312, Winter Quarter.

BSPS SAMPLE SCHEDULING PLAN I
(For enrollment of Freshmen prior to AU07)

The following represents a sample scheduling plan for BSPS students who entered the major as freshmen prior to AU07. We encourage students to plan their academic program early, review this plan with your academic advisor, and update the plan from time to time as conditions change. Transfer students should consult with an academic advisor to determine which BSPS curriculum they should be following.

BSPS Sample Program [Note: Students should plan their own individualized schedule in consultation with the Student Affairs staff.]

YEAR 1

Autumn		Winter		Spring	
Chemistry 121	5	Chemistry 122	5	Chemistry 123	5
Math 150	5	Math 151	5	Math 152	5
GEC/Electives*	<u>5-8</u>	Biology 113	5	Biology 114	5
Total hours	15-18	<u>Electives*</u>	<u>0-3</u>	<u>GEC/Electives*</u>	<u>0-3</u>
		Total hours	15-18	Total hours	15-18

YEAR 2

Autumn		Winter		Spring	
Chemistry 251	4	Chemistry 252	4	Chemistry 253	4
Physics 111/131	5	Chemistry 245/254	2/3	Chemistry 246/255	2/3
Physiology 311 or	5	Physics 112/132	5	Physics 113/133	5
EEOB 232	5	Physiology 312 or		<u>GEC/Electives*</u>	<u>5</u>
<u>GEC/Electives*</u>	<u>2-5</u>	<u>EEOB 232</u>	<u>5</u>	Total hours	16-17
Total hours	16-19	Total hours	16-17		

YEAR 3

Autumn		Winter		Spring	
Pharmacy 420	4	Pharmacy 462	3	Pharmacy 410	3
Pharmacy 461	3	Pharmacy 480	3	<u>GEC/Electives*</u>	<u>9-12</u>
<u>GEC/Electives*</u>	<u>8-10</u>	Pharmacy 515	3	Total hours	12-15
Total hours	15-17	<u>GEC/Electives*</u>	<u>9-10</u>		
		Total hours	18-16		

YEAR 4

Autumn		Winter		Spring	
Pharmacy 411 Lab**	2	Pharmacy 421 Lab**	2	Pharmacy 481 Lab**	2
<u>GEC/Electives*</u>	<u>13-15</u>	<u>GEC/Electives*</u>	<u>13-15</u>	<u>GEC/Electives*</u>	<u>13-15</u>
Total hours	15-17	Total hours	15-17	Total hours	15-17

* "GEC/Electives" includes general education courses, program electives and free electives, which should be scheduled as possible.

** Students must select two laboratory courses from those offered in the Divisions of Medicinal Chemistry and Pharmacognosy, Pharmaceutics and Pharmaceutical Chemistry, Pharmacology, and Analytical Chemistry.

Although students may transfer to the College of Pharmacy after earning 45 credit hours, they are ineligible to begin taking pharmacy classes until all course prerequisites are met.

BSPS SAMPLE SCHEDULING PLAN II
(For enrollment of Freshmen beginning AU 07)

The following represents a sample scheduling plan for BSPS students who entered the major as freshmen beginning AU07. We encourage students to plan their academic program early, review this plan with your academic advisor, and update the plan from time to time as conditions change. Transfer students should consult with an academic advisor to determine which BSPS curriculum they should be following.

BSPS Sample Program [Note: Students should plan their own individualized schedule in consultation with the Student Affairs staff.]

YEAR 1

Autumn		Winter		Spring	
Math 150	5				
Chemistry 121	5	Math 151	5	Chemistry 123	5
GEC/Electives*	5	Chemistry 122	5	Math 152	5
Pharmacy Survey	1	GEC/Electives*	5	GEC/Electives*	5
<u>Total hours</u>	<u>16</u>	<u>Total hours</u>	<u>15</u>	<u>Total hours</u>	<u>15</u>

YEAR 2

Autumn		Winter		Spring	
		Chemistry 252	4	Chemistry 253	4
Chemistry 251	4	Chemistry 245/254	2/3	Chemistry 246/255	2/3
Biology 113	5	Biology 114	5	Physics 111	5
GEC/Electives*	10	GEC/Electives*	5	GEC/Electives*	5-7
<u>Total hours</u>	<u>19</u>	<u>Total hours</u>	<u>16-17</u>	<u>Total hours</u>	<u>16-19</u>

YEAR 3

Autumn		Winter		Spring	
Physics 112	5	Physics 113	5	Pharmacy 410	3
Pharmacy 461	3	Pharmacy 462	3	GEC/Electives*	10
EEOB 232	5	Pharmacy 480	3	<u>Total hours</u>	<u>13</u>
GEC/Electives*	5	Pharmacy 515	3		
<u>Total hours</u>	<u>18</u>	<u>Total hours</u>	<u>14</u>		

YEAR 4

Autumn		Winter		Spring	
Pharmacy 420	4	Pharmacy 421**	2	Pharmacy 481**	2
Pharmacy 411**	2	Chemistry 211**	5	Chemistry 221**	5
GEC/Electives*	10	GEC/Electives*	5-10	GEC/Electives*	5-10
<u>Total hours</u>	<u>16</u>	<u>Total hours</u>	<u>12-17</u>	<u>Total hours</u>	<u>12-17</u>

* "GEC/Electives" includes general education courses, program electives and free electives, which should be scheduled as possible.

** Students must select two laboratory courses from those offered in the Divisions of Medicinal Chemistry and Pharmacognosy, Pharmaceutics and Pharmaceutical Chemistry, Pharmacology, and Analytical Chemistry.

Although students may transfer to the College of Pharmacy after earning 45 credit hours, they are ineligible to begin taking pharmacy classes until all course prerequisites are met.

UNIVERSITY UNDERGRADUATE GENERAL EDUCATION REQUIREMENTS

Description

The University requires specific course work of all students who wish to receive a baccalaureate degree. These requirements are defined as the General Education Curriculum (GEC). Pharmacy students who have earned a Bachelor's degree from an accredited U.S. institution are not required to complete the general education requirements, but must have earned the required number of credits for graduation.

GEC Course List

A list of eligible General Education Curriculum (GEC) courses can be found at the following website:
http://www.pharmacy.ohio-state.edu/academics/bsps/bsps_main.cfm#GECreq

REQUIREMENTS FOR THE GENERAL EDUCATION CURRICULUM (GEC)
BSPS CURRICULUM I (FRESHMAN STUDENTS ENTERING PRIOR TO AU07)

Students in the BSPS program must complete the General Education Curriculum in addition to all other programmatic requirements. The complete General Education Curriculum includes eight components. The manner in which students in the College of Pharmacy fulfill them is described below. You will find it helpful to your understanding of the GEC if you consult the list of *Approved General Education Curriculum (GEC) Courses*.

I. Writing and Related Skills (10 hours)

- A. **First Course** - five hours should be completed during the first year.
- B. **Second Course** - five hours should be completed during the second year. The second writing course may double count for another GEC requirement if the course appears on both GEC lists.
- C. **Third Course** - this requirement will be fulfilled within the required pharmacy coursework.

II. Quantitative and Logical Skills: This component is fulfilled by completing the required pharmacy coursework.

III. Foreign Language: Pharmacy students following the BSPS Curriculum I are not required to satisfy this component.

IV. Social Diversity in the United States: A student may overlap courses used to satisfy this requirement with another GEC category (such courses are marked with a bullet “•”). The College strongly recommends that students plan to fulfill this requirement by taking an “overlapping” course. Should a student fail to do so, the requirement still must be satisfied and may add to hours required for graduation.

V. Natural Science: This component is fulfilled by completing the required pharmacy coursework.

VI. Social Science (15 hours)

Three courses must be taken from at least two of the following three groups:

- A. **Individuals and Groups**
- B. **Organizations and Politics**
- C. **Human, Natural and Economic Resources**

VII. Arts and Humanities (25 hours)

- A. **Part 1. Historical Survey** - a 10-hour sequence must be completed.
- B. **Part 2. Analysis of Texts and Works of Art** - 15 hours must be completed with at least one course in literature and one in the visual and/or performing arts.

VIII. Capstone Experiences: Current pharmacy students are *not* required to satisfy this component.

UNIVERSITY UNDERGRADUATE GENERAL EDUCATION REQUIREMENTS
To be used with BSPS Curriculum II

Description

The University requires specific course work of all students who wish to receive a baccalaureate degree. These requirements are defined as the General Education Curriculum (GEC). Students in the BSPS program must complete the GEC in addition to all other programmatic requirements.

Requirements for the GEC

Undergraduate students in the College of Pharmacy must complete the GEC described below. You will find it helpful to consult the list of *Approved GEC Courses* list which follows.

- I. **Writing and Related Skills (10 hours)**
 - A. **First Course** - five hours should be completed during the first year.
 - B. **Second Course** - five hours should be completed during the second year. The second writing course may double count for another GEC requirement if the course appears on both GEC lists.
 - C. **Third Course** - this requirement will be fulfilled within the required pharmacy coursework.
- II. **Quantitative and Logical Skills:** This component is fulfilled by completing the required pharmacy coursework.
- III. **Foreign Language:** Students must complete foreign language proficiency through the 104 level.
- IV. **Natural Science:** This component is fulfilled by completing the required pharmacy coursework.
- V. **Social Science (10 hours)**

Two courses must be taken from at least two of the following three groups:

 - D. **Individuals and Groups**
 - E. **Organizations and Politics**
 - F. **Human, Natural and Economic Resources**
- VI. **Arts and Humanities (20 hours)**
 - C. **Part 1. Historical Survey** - a 10-hour sequence must be completed.
 - D. **Part 2. Analysis of Texts and Works of Art** - 10 hours (two courses) must be completed, taken from at least two of the following three groups:
 - Literature
 - Visual and/or Performing Arts
 - Cultures and Ideas.
- VII. **Capstone Experiences:** Current pharmacy students are *not* required to satisfy this component.

DEGREE REQUIREMENTS CHECKLISTS

The pages to follow contain curriculum checklists for the PharmD and BS in the Pharmaceutical Sciences programs, including the scheduling patterns for the PharmD curriculum. Students can use these sheets to record their progress toward satisfying degree requirements. All courses listed on the checklists, the approved elective hours for PharmD students, and program/free electives for BSPS students must be satisfied prior to graduation.

Please note, there are currently two BSPS Checklists due to recently approved curricular changes. Checklist I should be followed by students who entered the College of Pharmacy prior to AU07. Checklist II should be followed by students who entered the College of Pharmacy as Freshmen AU07 and beyond. The BSPS Checklist that a transfer student will follow will be determined in consultation with a BSPS Academic Advisor.

**THE OHIO STATE UNIVERSITY
DOCTOR OF PHARMACY (PHARMD)
DEGREE REQUIREMENTS CHECKLIST**

All requirements listed below must be completed prior to graduation. Any questions or concerns should be addressed to Student Affairs, 150 Parks Hall.

Professional Core Courses					
<u>YEAR 1: Autumn</u>		<u>Winter</u>		<u>Spring</u>	
Pharmacy 601	(3) _____	Pharmacy 602	(3) _____	Pharmacy 607	(5) _____
Pharmacy 605	(3) _____	Pharmacy 606	(3) _____	Pharmacy 623	(4) _____
Pharmacy 621	(3) _____	Pharmacy 622	(3) _____	Pharmacy 624	(1) _____
Pharmacy 661	(3) _____	Pharmacy 662	(3) _____	Pharmacy 664	(1) _____
Pharmacy 664	(1) _____	Pharmacy 664	(1) _____	Pharmacy 673	(3) _____
Physiol 601*	(5) _____	Physiol 602*	(5) _____		
<u>YEAR 2: Autumn</u>		<u>Winter</u>		<u>Spring</u>	
Pharmacy 710	(2) _____	Pharmacy 732	(4) _____	Pharmacy 733	(3) _____
Pharmacy 731	(4) _____	Pharmacy 748	(3) _____	Pharmacy 749	(3) _____
Pharmacy 747	(3) _____	Pharmacy 775	(3) _____	Pharmacy 776	(3) _____
Pharmacy 774	(3) _____	Pharmacy 778	(4) _____	Pharmacy 779	(4) _____
Pharmacy 777	(5) _____			Pharmacy 711	(2) _____
<u>YEAR 3: Autumn</u>		<u>Winter</u>		<u>Spring</u>	
Pharmacy 750	(3) _____	Pharmacy 724	(3) _____	Pharmacy 752	(3) _____
Pharmacy 763	(3) _____	Pharmacy 751	(3) _____	Pharmacy 782	(5) _____
Pharmacy 780	(4) _____	Pharmacy 781	(4) _____	Pharmacy 784	(1) _____
Pharmacy 784	(1) _____	Pharmacy 784	(1) _____	Pharmacy 788	(3) _____
Pharmacy 786	(3) _____			Pharmacy 790	(3) _____
<u>YEAR 4: Autumn</u>		<u>Winter</u>		<u>Spring</u>	
Pharmacy 799.01	(10) _____	Pharmacy 799.03	(5) _____	Pharmacy 799.06	(5) _____
Pharmacy 799.02	(10) _____	Pharmacy 799.04	(5) _____	Pharmacy 799.07	(5) _____
		Pharmacy 799.05	(5) _____	Pharmacy 693	(2) _____

* *Physiol 604 & 605 (4 hours each) for students admitted before Autumn 2003.*

Professional Electives

A minimum of 10 hours or elective coursework (12 hours for students admitted before Autumn 2003) must be completed as approved by the student's faculty advisor.

	(hrs)
	(hrs)
	(hrs)
	(hrs)
	(hrs)

Updated 2/2009

BSPS DEGREE REQUIREMENTS CHECKLIST I

*Freshmen students entering prior to AU07 or transfer students with less than 45 hours.

All of the requirements listed below must be completed prior to graduation. Any questions or concerns should be addressed to the College of Pharmacy Student Affairs.

GENERAL EDUCATION CURRICULUM

English 110.01/110.02 (5) _____	2 nd Writing (5) _____	Texts and Works of Art
		1. _____(Literature)
Social Sciences (15)	Social Diversity (5) _____	2. _____(Visual & Perform. Arts)
1. _____		3. _____
2. _____	Arts and Humanities (25)	
3. _____	History Sequence	
	1. _____	
	2. _____	

BSPS REQUIREMENTS (Non-Pharmacy)

Biology 113	(5)_____	Chemistry 245 or 254	(2/3)_____	Physics 111 or 131	(5)_____
Biology 114	(5)_____	Chemistry 246 or 255	(2/3)_____	Physics 112 or 132	(5)_____
				Physics 113 or 133	(5)_____
Chemistry 121	(5)_____	Math 150	(5)_____		
Chemistry 122	(5)_____	Math 151	(5)_____	Physiology 311 &	(5)_____
Chemistry 123	(5)_____	Math 152	(5)_____	Physiology 312	(5)_____
				-or-	
Chemistry 251	(4)_____			EEOB 232	(5)_____
Chemistry 252	(4)_____				
Chemistry 253	(4)_____				

BSPS REQUIREMENTS (Pharmacy)

Pharmacy 410	(3)_____	Pharmacy 462	(3)_____	Lab Courses (take at least two):	
Pharmacy 420	(4)_____	Pharmacy 480	(3)_____	Pharmacy 411	(2)_____
Pharmacy 461	(3)_____	Pharmacy 515	(3)_____	Pharmacy 421	(2)_____
				Pharmacy 481	(2)_____
				*Chem 211/221 (and 3 electives)	(2)_____

PROGRAM ELECTIVES (28 Hours)

At least 16 hours must be taken in the College of Pharmacy – select from the following:

Pharmacy 200	(3)_____	Pharmacy 472	(2)_____	Pharmacy 493	(1-7)_____
Pharmacy 400	(2)_____	Pharmacy 473	(2)_____	Pharmacy 614	(2)_____
Pharmacy 425	(3)_____	Pharmacy 513.01	(3)_____	Pharmacy 616	(3)_____
Pharmacy 471	(2)_____			Pharmacy 617	(2)_____

The remaining program electives (to a total of 28 hours) must be selected from the following list (additional courses may be substituted or added by petition):

AMIS 310	(5)_____	Classics 210	(3)_____	Microbiology 509	(5)_____
Anatomy & ME 199 or 200	(5/6)_____	COMM 321	(5)_____	Molecular Genetics 500	(5)_____
Biostatistics 318	(5)_____	Economics 200	(5)_____	Neuroscience 300	(3)_____
Business-Finance 420	(4)_____	Economics 501	(5)_____	Statistics 135	(5)_____
Business-MHR 400	(4)_____	English 303	(5)_____	Statistics 145	(5)_____
Business-MGT 430	(4)_____	English 304	(3)_____	Statistics 528	(3)_____
Business-MKT 450	(4)_____	English 405	(5)_____	Statistics 529	(3)_____
Chemistry 211/221	(3 or 5)_____	HIMS 500	(3)_____	Statistics 530	(4)_____
				EEOB 235	(5)_____

FREE ELECTIVES (15 Hours)

Any non-remedial course (i.e., classes below the level of required courses) at the 100 level or above may be counted toward these hours:

_____ (___ hrs)	_____ (___ hrs)	_____ (___ hrs)
_____ (___ hrs)	_____ (___ hrs)	_____ (___ hrs)

BSPS DEGREE REQUIREMENTS CHECKLIST II*

*Freshmen students entering AU07 and beyond. Transfer students must consult with an academic advisor to determine which BSPS curriculum they will follow.

All of the requirements listed below must be completed prior to graduation. Any questions or concerns should be addressed to the College of Pharmacy Student Affairs.

GENERAL EDUCATION CURRICULUM

English 110 (5) _____	Arts and Humanities (20)	Foreign Language (through 104)
2 nd Writing (5) _____	History Sequence (10) _____	1. 101 (5) _____
Social Sciences (10)	1. _____	2. 102/102.66 (5) _____
1. _____	2. _____	3. 103/103.66 (5) _____
2. _____	Texts and Works of Art (10)	4. 104 (5) _____
Note: Three courses in the GEC area must come from the list of courses that satisfy Diversity Experiences Requirements	Select 2 courses from 2 of the 3 categories listed (Literature, Visual/Performing Arts, Cultures & Ideas)	
	1. _____	
	2. _____	GEC Hours _____

BSPS REQUIREMENTS (Non-Pharmacy)

Biology 113 (5) _____	Chemistry 245 or 254 (2/3) _____	Physics 111 or 131 (5) _____
Biology 114 (5) _____	Chemistry 246 or 255 (2/3) _____	Physics 112 or 132 (5) _____
		Physics 113 or 133 (5) _____
Chemistry 121 (5) _____	Math 150 (5) _____	Physiology Requirement:
Chemistry 122 (5) _____	Math 151 (5) _____	EEOB 232 (5) _____
Chemistry 123 (5) _____	Math 152 (5) _____	OR
		Physiology 311 (5) _____
Chemistry 251 (4) _____		AND Physiology 312 (5) _____
Chemistry 252 (4) _____		
Chemistry 253 (4) _____		
		BSPS Non-Pharmacy Hours _____

BSPS REQUIREMENTS (Pharmacy)

Pharmacy 410 (3) _____	Pharmacy 462 (3) _____	Lab Courses (take at least two):
Pharmacy 420 (4) _____	Pharmacy 480 (3) _____	Pharmacy 411 (2) _____
Pharmacy 461 (3) _____	Pharmacy 515 (3) _____	Pharmacy 421 (2) _____
		Pharmacy 481 (2) _____
		Chem 211/221 (2) _____
		(and 3 electives)
		BSPS Pharmacy Hours _____

BSPS PROGRAM ELECTIVES (16 Hours)

At least 16 hours must be taken in the College of Pharmacy – select from the following:

Pharmacy 200 (3) _____	Pharmacy 472 (2) _____	Pharmacy 513.02 (1) _____	Pharmacy 617 (2) _____
Pharmacy 400 (2) _____	Pharmacy 473 (2) _____	Pharmacy 513.03 (1) _____	Pharmacy 695 (2) _____
Pharmacy 425 (3) _____	Pharmacy 493/693 (1-7) _____	Pharmacy 614 (2) _____	
Pharmacy 471 (2) _____	Pharmacy 513.01 (3) _____	Pharmacy 616 (3) _____	
			Program Elective Hours _____

ELECTIVES (TO A TOTAL OF AT LEAST 182 HOURS)

Non-remedial courses (i.e., classes below the level of required courses) at the 100 level or above may be counted.

_____ (___ hrs)	_____ (___ hrs)	_____ (___ hrs)
_____ (___ hrs)	_____ (___ hrs)	_____ (___ hrs)
_____ (___ hrs)	_____ (___ hrs)	_____ (___ hrs)
		Total Hours _____

Updated 8/2009