

# SCHOOL OF PHARMACY

[Overview](#)

[Academics & Admissions](#)

[Departments](#)

[Programs](#)

[Courses](#)

[Faculty](#)

[Awards](#)

## Courses

### [SCHOOL OF PHARMACY](#)

- [Phcy 100: Introduction to Pharmacy](#)
- [Phcy 400: Becoming a Pharmacist](#)
- [Phcy 401: Foundations of BioMolecular Sciences I](#)
- [Phcy 402: Foundations of BioMolecular Sciences II](#)
- [Phcy 411: Human Physiology/Pathophysiology I](#)
- [Phcy 412: Human Physiology/Pathophysiology II](#)
- [Phcy 421: Pharmaceutics and Calculations I](#)
- [Phcy 422: Pharmaceutics and Calculations II](#)
- [Phcy 431: Social and Administrative Pharmacy I](#)
- [Phcy 432: Social and Administrative Pharmacy II](#)
- [Phcy 441: Pharmacists' Patient Care Process I](#)
- [Phcy 442: Pharmacists' Patient Care Process II](#)
- [Phcy 451: Pharmacogenomics](#)
- [Phcy 452: Pharmacoinmunology](#)
- [Phcy 460: Personal and Professional Development I](#)
- [Phcy 461: Interprofessional Collaboration I](#)
- [Phcy 481: Pharmacy Practice Applications I](#)
- [Phcy 482: Pharmacy Practice Applications II](#)
- [Phcy 501: Infectious Diseases Intensive](#)
- [Phcy 502: Integrated Systems: Cardiovascular](#)
- [Phcy 503: Integrated Systems: Respiratory](#)
- [Phcy 504: Integrated Systems: Renal](#)
- [Phcy 505: Integrated Systems: Neuromuscular](#)
- [Phcy 506: Integrated Systems: CNS/Psych](#)
- [Phcy 507: Integrated Systems: Endocrine System](#)
- [Phcy 508: Integrated Systems: GI/Nutrition](#)
- [Phcy 509: Integrated Systems: DERM/EENT](#)
- [Phcy 550: Integrated Institutional IPPE](#)
- [Phcy 560: Personal and Professional Development II](#)
- [Phcy 561: Interprofessional Collaboration II](#)
- [Phcy 581: Pharmacy Practice Applications III](#)
- [Phcy 601: Multisystem Complex Patient Care I](#)
- [Phcy 602: Hematology/Oncology/Immunology](#)
- [Phcy 603: Integrated Genitourinary & Reproductive](#)
- [Phcy 604: Pediatrics and Geriatrics](#)
- [Phcy 605: Integrated Selective IPPE](#)
- [Phcy 606: Population and Rural Health](#)
- [Phcy 607: Practice Law Application](#)
- [Phcy 608: Multisystem Complex Patient Care II](#)
- [Phcy 650: Integrated Comm & Ambulatory IPPE](#)
- [Phcy 651: Integrated Inst & Specialty IPPE](#)
- [Phcy 660: Personal & Professional Development III](#)
- [Phcy 661: Interprofessional Collaboration III](#)
- [Phcy 681: Pharmacy Practice Applications V](#)
- [Phcy 682: Pharmacy Practice Applications VI](#)
- [TOCP 591: Transitions of Care Patient Care APPE](#)



## **MEDICINAL CHEMISTRY**

- [BMS 345: Anatomical Foundations in Human Health](#)
- [BMS 401: Honors Introduction to Cancer Research](#)
- [BMS 470: Antimicrobial Resistance Mechanisms](#)
- [BMS 471: Targeting Neurodegenerative Diseases](#)
- [BMS 472: Spanish for Pharmacists](#)
- [BMS 473: Medical Cannabis](#)
- [BMS 474: Pandemics and Society](#)
- [BMS 475: Molecular Basis of Future Medicines](#)
- [BMS 476: Intro to AI & Applications in Pharmacy](#)
- [BMS 601: Graduate Student Survival Strategies](#)
- [BMS 602: Techniques in BioMolecular Sciences](#)
- [BMS 605: Original Research Proposal BMS](#)
- [BMS 608: Scientific Writing for BioMolecular Scie](#)
- [BMS 610: Carbohydrates and Glycoconjugates](#)
- [BMS 651: Fundamentals of Pharmacognosy and Phytoc](#)
- [BMS 652: Regulation of Dietary Supplements](#)
- [BMS 653: Formulation and Manufacturing of Dietary](#)
- [BMS 654: Identification and Authentication of Die](#)
- [BMS 655: Pharmacology and Toxicology of Dietary S](#)
- [BMS 661: Cannabis Identification, Genomics, & Eng](#)
- [BMS 662: Cannabis Policy & Law Syllabus](#)
- [BMS 663: Formulation & Manufacturing of Cannabis](#)
- [BMS 664: Chemistry & Standardization of Cannabis](#)
- [BMS 665: Pharmacology & Toxicology of Cannabinoid](#)
- [BMS 725: Mass Spectrometry: Fundamentals](#)
- [BMS 767: Advanced Topics in Toxicology](#)
- [Medc 317: Pharmacogenetics and Pharmacoimmunology](#)
- [Medc 318: Chemical and Biological Terrorism](#)
- [Medc 411: Medicinal Chem of Therapeutic Agents I](#)
- [Medc 412: Medicinal Chem of Therapeutic Agents II](#)
- [Medc 415: Chemical Neurosci. Prin. of Drug Abuse](#)
- [Medc 416: Intro to the Principles of Med Chem I](#)
- [Medc 417: Intro to the Principles of Med Chem II](#)
- [Medc 418: Neuroscience Principles of Drug Abuse](#)
- [Medc 419: Special Topics in Oncology](#)
- [Medc 501: Advanced Medicinal Chemistry I](#)
- [Medc 502: Advanced Medicinal Chemistry II](#)
- [Medc 503: Medicinal Chemistry Research Methodology](#)
- [Medc 507: Organic Chemistry of Drug Synthesis](#)
- [Medc 541: Problems in Medicinal Chemistry](#)
- [Medc 542: Problems in Medicinal Chemistry](#)
- [Medc 543: Seminar on Current Medicinal Chem Topics](#)
- [Medc 544: Seminar on Current Medicinal Chem Topics](#)
- [Medc 609: Drug Action & Design V: Heterocyclic Com](#)
- [Medc 610: Selected Topics in Medicinal Chemistry](#)
- [Medc 611: Drug Action & Design I: Intro to Com-Aid](#)
- [Medc 612: Drug Action & Design II: Quantit Struct-](#)
- [Medc 613: Drug Action & Design III: Drugs Affectin](#)
- [Medc 614: Drug Action & Design IV: Chemotherapy of](#)
- [Medc 618: Drug Action & Design VI: Bioorganic Chem](#)
- [Medc 620: Drug Action & Design VII: Combinatorial](#)
- [Medc 621: Theory of Technology Development](#)
- [Medc 622: Early Stages of Technology Development](#)
- [Medc 623: Fostering Creative Environments](#)
- [Medc 625: Applied Igert Problems](#)
- [Medc 630: Pharmaceutical Protein Design & Devel](#)
- [Medc 643: Seminar on Current Medicinal Chem Topics](#)
- [Medc 644: Seminar on Current Medicinal Chem Topics](#)



- [Medc 697: Thesis](#)
- [Medc 797: Dissertation](#)
- [Phcg 426: Cancer Chemo - Targets and Discovery](#)
- [Phcg 550: Careers/Achievements in BMS](#)

## **PHARMACEUTICS**

- [Phar 330: Pharmaceutical Calculations](#)
- [Phar 331: Basic Pharmaceutics I](#)
- [Phar 332: Basic Pharmaceutics II](#)
- [Phar 334: Biopharmaceutics and Pharmacokinetics](#)
- [Phar 335: Clinical Laboratory Data Analysis](#)
- [Phar 432: Concepts in Pharmaceutical Biotechnology](#)
- [Phar 433: Industrial Pharmacy](#)
- [Phar 435: Pharmaceutical Stability](#)
- [Phar 436: Product Development](#)
- [Phar 437: 3D Printing of Pharmaceutical Dosage For](#)
- [Phar 541: Problems in Pharmaceutics](#)
- [Phar 542: Problems in Pharmaceutics](#)
- [Phar 543: Seminar in Current Pharm. Topics](#)
- [Phar 544: Seminar in Current Pharm. Topics](#)
- [Phar 545: Biopharmaceutics and Pharmacokinetics](#)
- [Phar 547: Veterinary Pharmaceutics](#)
- [Phar 630: Pharm. Protein Design and Development](#)
- [Phar 635: Analytical Pharmaceutics](#)
- [Phar 641: Advanced Pharmaceutics](#)
- [Phar 644: Stability of Pharmaceutical Systems](#)
- [Phar 649: Product Development](#)
- [Phar 650: Applied Pharmaceutics](#)
- [Phar 650: Formulation Development](#)
- [Phar 651: Regulatory Science I](#)
- [Phar 652: Regulatory Science II](#)
- [Phar 654: Special Problems in Biopharmaceutics](#)
- [Phar 658: Pharmaceutical Manufacturing](#)
- [Phar 660: Advanced Pharmacokinetics](#)
- [Phar 696: Special Projects](#)
- [Phar 697: Thesis](#)
- [Phar 797: Dissertation](#)

## **PHARMACOGNOSY**

- [Phcg 320: Special Topics in Oceans & Human Health](#)
- [Phcg 321: Pathogenesis of Infectious Diseases](#)
- [Phcg 329: Herbal Supplements & Alternative Therapy](#)
- [Phcg 421: Path & Etiology of Infectious Diseases](#)
- [Phcg 422: Natural Product Derived Pharmaceuticals](#)
- [Phcg 425: Poisonous Plants and Mushrooms](#)
- [Phcg 427: Drug Discovery I](#)
- [Phcg 428: Drug Discovery II](#)
- [Phcg 429: Botanicals and Traditional Medicine](#)
- [Phcg 450: Career/Achievements in BMS: Nat.Prod.Res](#)
- [Phcg 451: Probiotics in Pharmacy](#)
- [Phcg 541: Problems in Pharmacognosy](#)
- [Phcg 542: Problems in Pharmacognosy](#)
- [Phcg 543: Seminar in Natural Products Chemistry](#)
- [Phcg 544: Seminar in Natural Products Chemistry](#)
- [Phcg 545: Individual Study in Pharmacognosy Res](#)
- [Phcg 546: Individual Study in Pharmacognosy Res](#)
- [Phcg 620: Selected Topics in Pharmacognosy](#)
- [Phcg 627: Natural Product Chemistry](#)
- [Phcg 628: Natural Product Chemistry](#)
- [Phcg 630: Advanced Topics](#)



- [Phcg 631: Analysis of Natural Product Drugs I](#)
- [Phcg 632: Analysis of Natural Product Drugs II](#)
- [Phcg 633: Analysis of Natural Product Drugs III](#)
- [Phcg 634: Biosynthesis of Plant Constituents](#)
- [Phcg 635: Introduction to Molecular Cell Biology](#)
- [Phcg 636: Fermentation Chemistry](#)
- [Phcg 643: Seminar in Natural Products Chemistry](#)
- [Phcg 644: Seminar in Natural Products Chemistry](#)
- [Phcg 697: Thesis](#)
- [Phcg 797: Dissertation](#)

## **PHARMACOLOGY**

- [Phcl 202: Environmental Health Perspectives](#)
- [Phcl 340: Animal Cells: Testing New Drugs](#)
- [Phcl 341: Human Pathophysiology I](#)
- [Phcl 342: Human Pathophysiology II](#)
- [Phcl 343: Biochemical Foundations of Therapeutics](#)
- [Phcl 344: Physiological Foundation of Therapeutics](#)
- [Phcl 345: Nutritional Pharmacology](#)
- [Phcl 346: Immunological Basis for Therapeutics](#)
- [Phcl 347: Introduction to Environmental Toxicology](#)
- [Phcl 348: Principles of Life Science Research](#)
- [Phcl 349: Specialized Topics in Environ. Health](#)
- [Phcl 351: Drugs and Human Performance](#)
- [Phcl 352: Case Studies in Immunology](#)
- [Phcl 381: Introduction to Toxicology](#)
- [Phcl 440: Physiologic Case Study for Therapeutics](#)
- [Phcl 441: Pharmacology: Novel Drugs in Clin Trials](#)
- [Phcl 442: Clinical Toxicology](#)
- [Phcl 443: Basic and Clinical Pharmacology I](#)
- [Phcl 444: Basic and Clinical Pharmacology II](#)
- [Phcl 445: Nutritional Pharmacology](#)
- [Phcl 501: Principles of Life Science Research](#)
- [Phcl 503: Lab Meth in Pharmacology & Toxicology I](#)
- [Phcl 504: Lab Meth in Pharmacology & Toxicology II](#)
- [Phcl 505: Modern Phcl: Novel Drugs Clinical Trials](#)
- [Phcl 541: Problems in Pharmacology](#)
- [Phcl 547: Introduction to Environmental Toxicology](#)
- [Phcl 563: Introductory Pharmacology I](#)
- [Phcl 564: Introductory Pharmacology II](#)
- [Phcl 569: Drug Abuse Education](#)
- [Phcl 581: Introduction to Toxicology](#)
- [Phcl 586: Receptors and Channels](#)
- [Phcl 611: Teaching in Pharmacology and Toxicology](#)
- [Phcl 612: Teaching in Pharmacology and Toxicology](#)
- [Phcl 641: Unified Lab in Pharm, Tox & Phys Chem](#)
- [Phcl 642: Unified Lab in Pharm, Tox & Phys Chem](#)
- [Phcl 643: Seminar: Curr Topics in Pharm & Tox](#)
- [Phcl 651: Directed Studies in Pharm and Tox](#)
- [Phcl 652: Directed Studies in Pharm and Tox](#)
- [Phcl 661: Advanced Physiology](#)
- [Phcl 662: Advanced Physiology](#)
- [Phcl 663: General Pharmacology I](#)
- [Phcl 665: Human Neurobiology](#)
- [Phcl 668: Externship in Pharmacology](#)
- [Phcl 669: Physiological Chemistry](#)
- [Phcl 675: Gen Princ of Pharmacology & Toxicology I](#)
- [Phcl 676: Gen Princ - Pharmacology & Toxicology II](#)
- [Phcl 677: Advanced Topics](#)
- [Phcl 679: Methods in Pharmacology and Toxicology](#)



- [Phcl 681: Sel Topics - Pharmacology and Toxicology](#)
- [Phcl 685: Externship in Toxicology](#)
- [Phcl 697: Thesis](#)
- [Phcl 797: Dissertation](#)

### **PHARMACY ADMINISTRATION**

- [Phad 355: The Anthropology of Drugs](#)
- [Phad 390: Professional Communications in Pharmacy](#)
- [Phad 391: Pharmacy Administration I](#)
- [Phad 392: Pharmacy Administration II](#)
- [Phad 393: Learning & Teaching: A Professional Elec](#)
- [Phad 394: Intermed. Biostatistics for Pharmacists](#)
- [Phad 395: Pharmacy Ethics](#)
- [Phad 396: Marketing for Community Pharmacists](#)
- [Phad 430: Research Methods for Pharmacists](#)
- [Phad 470: Phy & Psychosoc Aspects Women's Health](#)
- [Phad 478: History of Pharmacy](#)
- [Phad 491: Pharmacy Law](#)
- [Phad 492: Current Issues in Health Care](#)
- [Phad 493: Pharmacy Management and Business Methods](#)
- [Phad 494: Pharmacoecon, Pharmacoepei & Med Safety](#)
- [Phad 495: Techniques of Pharmaceutical Sales](#)
- [Phad 496: Principles of Pharmaceutical Marketing](#)
- [Phad 497: Personal Finance](#)
- [Phad 541: Problems in Pharmacy Administration](#)
- [Phad 542: Problems in Pharmacy Administration](#)
- [Phad 543: Seminar in Current Health Topics](#)
- [Phad 544: Seminar in Current Health Topics](#)
- [Phad 545: Aspects of Pediatric Pharmacy Practice](#)
- [Phad 546: Film and Pharmacy](#)
- [Phad 547: Phy & Psychosoc Aspects Women's Health](#)
- [Phad 579: Primary Data Techniques](#)
- [Phad 597: Medical Anthropology](#)
- [Phad 599: Health Care and Contemporary Society](#)
- [Phad 630: Intro to Implementation Science](#)
- [Phad 661: Epidemiology and Health Data Management](#)
- [Phad 674: Research in Pharmacy Administration](#)
- [Phad 675: Health Agency Administration](#)
- [Phad 680: General Linear Models](#)
- [Phad 681: Applied Multivariate Analysis](#)
- [Phad 683: Adv Pharmaceutical Mkting & Patient Beha](#)
- [Phad 687: Secondary Data Techniques](#)
- [Phad 688: Research Methodology and Techniques](#)
- [Phad 689: Pharmaceutical and Healthcare Policy](#)
- [Phad 690: Data Management and Statistical Software](#)
- [Phad 692: Drug Development and Marketing](#)
- [Phad 693: Health Economics](#)
- [Phad 694: Pharmacoeconomics](#)
- [Phad 695: Special Topics in Pharmacy Administratio](#)
- [Phad 696: Pharmacoepidemiology](#)
- [Phad 697: Thesis](#)
- [Phad 698: Non-thesis Research](#)
- [Phad 786: Patient Reported Outcomes](#)
- [Phad 797: Dissertation](#)

### **PHARMACY PRACTICE**

- [Ambc 591: Ambulatory Care Clerkship](#)
- [Assn 591: State Association Management Advanced Ph](#)
- [Bari 591: Bariatric Advanced Pharmacy Practice Exp](#)
- [Biot 591: Biotech Pharmacy Services Advanced Pharm](#)



- [Card 591: Cardiology Clerkship](#)
- [Comm 591: Community Pharmacy Clerkship](#)
- [Crit 591: Critical Care Clerkship](#)
- [Dinf 591: Drug Information Clerkship](#)
- [Emer 591: Emergency Medical Clerkship](#)
- [Gera 591: Geriatrics Clerkship](#)
- [Home 591: Home Infusion Advanced Pharmacy Practice](#)
- [Inad 591: Institutional Administration Advanced Ph](#)
- [Indy 591: Pharmaceutical Industry Clerkship](#)
- [InfD 591: Infectious Disease Clerkship](#)
- [Info 591: Informatics Practice Experience](#)
- [Inop 591: Institutional Out-Patient Practice Exper](#)
- [Lead 591: Leadership and Advocacy in Pharmacy](#)
- [Manc 591: Managed Care Clerkship](#)
- [Medc 591: Medicine Clerkship](#)
- [Mgmt 591: Pharmacy Management Advanced Pharmacy Ph](#)
- [Mspe 591: Medication Safety Practice Experience](#)
- [Neon 591: Neonatology Advanced Pharmacy Practice E](#)
- [Neur 591: Neurology Clerkship](#)
- [Nucl 591: Nuclear Medicine Advanced Pharmacy Pract](#)
- [Nutr 591: Nutrition Clerkship](#)
- [Oncl 591: Oncology Clerkship](#)
- [Pain 591: Pain Management Advanced Pharmacy Practi](#)
- [Pedg 591: Pedagogy Advanced Practice Experience](#)
- [Peds 591: Pediatric Clerkship](#)
- [Pkin 591: Pharmacokinetics Clerkship](#)
- [Pmtm 591: Pharmacy Medication Therapy Management](#)
- [Pois 591: Poison Control Clerkship](#)
- [Prct 350: Information Skills in Pharmacy Practice](#)
- [Prct 353: Practice Skills Laboratory I](#)
- [Prct 354: Practice Skills Laboratory II](#)
- [Prct 357: Advocacy and Leadership in Pharmacy](#)
- [Prct 358: Geriatrics](#)
- [Prct 359: Tobacco Cessation Education](#)
- [Prct 360: Personal Time Mngment for Pharm Students](#)
- [Prct 361: Vaccine-preventable Illnesses/Travel med](#)
- [Prct 363: Pharmacy, Microcontrollers & the Interne](#)
- [Prct 375: Distributive Intro Pharmacy Practice Exp](#)
- [Prct 376: Selective Intro Pharmacy Practice Exp](#)
- [Prct 450: Pharmacy Practice I](#)
- [Prct 451: Pharmacy Practice II](#)
- [Prct 452: Pharmacy Practice III](#)
- [Prct 455: Practice Skills Laboratory III](#)
- [Prct 456: Practice Skills Laboratory IV](#)
- [Prct 457: Institutional Pharmacy Practice](#)
- [Prct 470: Introduction to Nuclear Pharmacy](#)
- [Prct 471: Advanced Topics in Cardiology](#)
- [Prct 472: Life After Graduation](#)
- [Prct 473: Beyond Dispensing](#)
- [Prct 474: Advanced Infectious Diseases](#)
- [Prct 475: Nutrition Support](#)
- [Prct 476: Wellbeing & Resiliency for Student Pharm](#)
- [Prct 477: Institutional Pharmacy Practice II](#)
- [Prct 478: Community Pharmacy Practice II](#)
- [Prct 480: Introduction to Global Health & Pharmacy](#)
- [Prct 486: Resiliency in Professional Life](#)
- [Prct 488: Advanced Topics in Diabetes Care](#)
- [Prct 489: Advanced Topics Critical & Emergent Care](#)
- [Prct 490: Landmark Trials](#)



- [Prct 520: Case Management I](#)
- [Prct 521: Case Management II](#)
- [Prct 522: Case Management III](#)
- [Prct 523: Case Management IV](#)
- [Prct 524: Case Management V](#)
- [Prct 525: Case Management VI](#)
- [Prct 526: Case Management VII](#)
- [Prct 527: Case Management VIII](#)
- [Prct 528: Case Management IX](#)
- [Prct 529: Case Management X](#)
- [Prct 530: Clinical Skills Evaluation I](#)
- [Prct 531: Clinical Skills Evaluation II](#)
- [Prct 532: Clinical Skills Evaluation III](#)
- [Prct 541: Problems in Clinical Pharmacy](#)
- [Prct 542: Problems in Clinical Pharmacy](#)
- [Prct 543: Community Pharmacy Practice III](#)
- [Prct 544: Institutional Pharmacy Practice III](#)
- [Prct 545: Specialty Pharmacy Practice Elective](#)
- [Prct 551: Information Skills in Pharmacy Practice](#)
- [Prct 552: Preventive Medicine and Public Health](#)
- [Prct 553: Clinical Externship \(community\)](#)
- [Prct 554: Clinical Externship \(institutional\)](#)
- [Prct 555: Pharmaceutical Care I: Knowledge & Compr](#)
- [Prct 556: Pharmaceutical Care I: Problem-Solvin](#)
- [Prct 557: Pharmaceutical Care I: Group](#)
- [Prct 558: Pharmaceutical Care II: Knowledge & Comp](#)
- [Prct 559: Pharmaceutical Care II: Problem-Solving](#)
- [Prct 560: Pharmaceutical Care II: Group](#)
- [Prct 561: Pharmaceutical Care III: Knowledge & Comp](#)
- [Prct 562: Pharmaceutical Care III: Problem-Solving](#)
- [Prct 563: Pharmaceutical Care III: Group](#)
- [Prct 564: Pharmaceutical Care IV: Knowledge & Comp](#)
- [Prct 565: Pharmaceutical Care IV: Problem-Solving](#)
- [Prct 566: Seminar Skills Dev for Health Prof](#)
- [Prct 567: Seminar Skills Dev for Health Prof II](#)
- [Prct 568: Pediatric Pharmacotherapy](#)
- [Prct 568: Pharmacy Biomedical Ethics](#)
- [Prct 569: Pharmaceutical Care IV: Group](#)
- [Prct 570: Patient-Caregiver-Provider Education](#)
- [Prct 586: Adult Medicine Clerkship](#)
- [Prct 587: Ambulatory Care Clerkship](#)
- [Prct 591: Elective Clerkship](#)
- [Prct 592: Elective Clerkship](#)
- [Prct 593: Elective Clerkship](#)
- [Prct 599: Clinical Trials Skills](#)
- [Psync 591: Psychiatry Clerkship](#)
- [Pubh 591: Public Health Advanced Pharmacy Practice](#)
- [Rsch 591: Research Advanced Pharmacy Practice Exp](#)
- [Spec 591: Specialty Pharmacy Practice Experience](#)
- [Surg 591: Surgery Clerkship](#)
- [Tran 591: Organ Transplant Advanced Pharmacy Pract](#)
- [Vetp 591: Veterinary Medicine Advanced Pharmacy Pr](#)
- [Womh 591: Women's Health Advanced Pharmacy Practic](#)

