### MCW School of Pharmacy

**Elective Courses**

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| 670    | 3       | Residency Exploration & Preparation  
*Dr. Bakken & George* | In this course students will learn how to identify post-graduate and/or employment opportunities, including PGY1/PGY2 Residency Programs, Fellowships and Post-Graduate Degree Programs. Students will learn to market themselves professionally, practice professional etiquette and create necessary residency materials, such as a CV and Letter of Intent. Through the course of this elective class, students will develop, practice, and refine skills needed to be successful during the residency search and interview process. |
| 671    | 3       | Mental Health Issues & Therapies  
*Dr. Bozymski* | Students will learn about non-pharmacologic and pharmacologic treatment of individuals living with mental illness. They will also explore the impact of stigma on these individuals’ lives through the exploration of trauma-informed care, literature/film portrayals, and historical/firsthand accounts. This course will build upon pharmacotherapy knowledge taught in PHAR 663 (Integrated Sequence: Neurology and Behavioral Health) and skills taught in PHAR 631 (Patient Care Laboratory VI) so that students will be able to assist individuals living with mental illness at a more comprehensive level. |
| 672    | 1.5     | Clinical Pharmacogenomics  
*Dr. Assem* | This course will give students a broad perspective on the emergence of pharmacogenomics as a new field and provide them with insight into the growing importance it will play in clinical therapeutics and future drug design. The course will be presented in three parts. The first part of the course will examine some of the common methodologies used in the application of pharmacogenomics along with the role pharmacogenomics can play in altering drug pharmacokinetics and pharmacodynamics. The second part of the course will focus on the role of pharmacogenomics in the pharmacotherapy of various diseases of the cardiovascular, CNS, hematologic, respiratory, and immune systems as well as cancer. Part three of the course will address other pertinent issues related to pharmacogenomics such as clinical testing, bioethics, drug development and toxicogenomics. |

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<td>673</td>
<td>1.5</td>
<td>Introduction to Family Medicine</td>
<td>This course incorporates prevalent inpatient and outpatient family medicine topics, including anticoagulation, hyperlipidemia, hypertension, diabetes, polypharmacy, comprehensive medication management, transitions of care and motivational interviewing. This course is also designed to emulate the unique continuity-of-care experiences specific to family medicine practice. The content will be delivered using both didactic and active learning strategies, with a large emphasis being placed on active student engagement. Course activities and group/individual assignments are designed to mimic scenarios students will encounter on a family medicine APPE rotation and include patient case workup, formal case presentations, written drug information responses and continuity of care for simulated patient families. Course activities are designed to foster student growth in critical thinking, writing, literature evaluation and public speaking skills.</td>
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<tr>
<td>674</td>
<td>3</td>
<td>Cellular &amp; Molecular Neuroscience</td>
<td>This course covers essential framework and fundamental aspects of neuroscience. Emphasis is placed on the molecular and cellular mechanisms underlying various processes of the brain. Core topics include: cellular and molecular mechanisms of neural development, neuronal network, coupling of energy metabolism and neuronal activity, cellular and molecular mechanisms of memory and somatosensation, endocannabinoid signaling and the molecular architecture of the synapse.</td>
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<tr>
<td>675</td>
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<td>Drug Discovery: From Conception to the Clinic</td>
<td>This course is designed to provide an understanding of the Drug Discovery process, from the conception and enablement of an idea for a new therapeutic, to its advancement to clinical research (up to, but not including any further than phase 1). The course will look at the process used to identify and validate a target for a particular disease, then look at how assays (both in vitro and in vivo) are developed and implemented in the process. This course will also look at how target molecules are identified, and then optimized, including in vitro, in vivo, ADMET and toxicology data to justify the selection of a single molecule for development.</td>
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<td>676</td>
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<td>Advanced Drug Delivery Systems: Bench to Bedside</td>
<td>Students will continue to build on topics learned in Pharmaceutical Drug Delivery I and II with a larger focus on advanced drug delivery systems. Students will learn in-depth about the next-generation delivery systems through lecture, lab rotations and pharmaceutical practice prospective.</td>
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| 677    | 1.5     | Developing the Leader Within  
Dr. DeBisschop | In this course, students will explore contemporary leadership philosophies, theories, and skills. Students will learn what a leader does and begin to develop a toolbox to exercise their own leadership. Emphasis in this course is on developing the student’s identity as a leader, focusing on self-awareness, personal strengths, and engaging in different ways of thinking about themselves and leading others. The learner will participate in activities designed to improve their working knowledge and experience with leadership concepts, including reflections, leadership assessments, discussion, and presentation. |
| 678    | 1.5     | Informatics  
Dr. Winn | Introduction to informatics, electronic health care records, clinical decision support, automation, wearable devices, and sources of data for clinical and business applications. Students will learn the basics of informatics and how to effectively manipulate large data sets using Excel functions such as pivot tables, conditional equations and data visualization tools. |
| 679    | 1.5     | Medical Spanish for Pharmacists  
Dr. Lor | Students will develop basic and intermediate professional Spanish communication skills for pharmacists. Students will learn key vocabulary necessary to provide patient education and obtain a medication history in Spanish. Students will gain a cultural awareness to provide culturally-appropriate care to Spanish-speaking patients. This course will be taught primarily in Spanish and supplemented with English. Students will be required to speak, listen and write in Spanish. |
| 680    | 3       | Clinical Toxicology  
Dr. El-Alfy | This course is designed to apply basic pharmacological and toxicological principles to the management of poisoned patients. Several of the drugs commonly encountered in accidental or intentional poisoning are to be covered. The student should be able to recognize signs and symptoms of poisoning, characterize the type and extent of intoxication, and develop a specific management plan. The course is taught in collaboration with the Wisconsin Poison Center. All topics will be covered in a patient-centered, case-based format. |
| 682    | 3       | Advanced Infectious Diseases  
Drs. Bunnell & Revolinski | This course expands upon the infectious diseases pharmacotherapy content in the Integrated Sequence, introducing students to more specialized topics such as multi-drug resistant organisms, infections in immunocompromised hosts, HIV/AIDS, and fungal, viral, and parasitic infections encountered in hospital and global settings. The role of the pharmacist as a provider of infectious diseases services will be emphasized in various settings. |

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| 683    | 3       | *Substances of Abuse & Addiction*  
*Dr. Abourashed* | This course provides in-depth knowledge of the neuropharmacology of substances of abuse including CNS stimulants, depressants, hallucinogens, inhalants, and steroids. Basic pharmacokinetic and pharmacodynamic mechanisms related to the effects of the individual substances of abuse will be emphasized. Current theories of addiction and tolerance will be presented in addition to various treatments for dependence and detection methods, as well as social, legal, and ethical aspects of substance abuse. |
| 684    | 3       | *Pharmacoeconomics*  
*Dr. Winn* | Students will be introduced to the methods and will apply techniques of economic evaluation to health care technologies. This class will provide students with the tools to help guide resource allocation decisions to the most efficient health technologies. This class will cover basic methods used to create mathematical models of disease progression, structure economic evaluations, measure and summarize outcomes, create predictions for patient and population outcomes including health outcomes, costs and cost-effectiveness. This class will focus on the techniques for economic evaluation of health care and reporting results in a transparent manner. This class is a hands on class that teaches students how to conduct pharmacoeconomic analyses using Excel. |
| 685    | 1.5     | *Transplant Pharmacy: Transitions of Care*  
*Dr. Graff* | Transplant pharmacy is a unique and incredible opportunity for pharmacists. This course is designed for students with a strong interest or curiosity in this subset of pharmacy practice. The topics for this course will be divided into four sections: adult hematopoietic stem cell transplantation (HSCT), pediatric HSCT, adult solid organ transplantation (SOT), and pediatric SOT. Class time will be spent between mini-lectures and actively participating in case-based patient scenarios to guide students through the complex critical thinking skills required to care for these patients. |
| 686    | 1.5     | *Pediatrics*  
*Drs. Cramer & Graff* | This course will introduce students to the unique field of pediatric pharmacy. Students will gain an understanding of common pediatric disease states and the associated pharmaceutical treatments. The course will also focus on how developmental age affects the pharmacokinetics and pharmacodynamics of various medications. Neonatology will be a large focus of the class to reflect the growing number of hospitals that have a NICU ward. Each class period will be a combination of lecture and case-based discussion. |

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| 687    | 1.5     | **Effective Leadership for Pharmacy Practice**  
*Dr. DeBisschop* | In this course, students will explore contemporary leadership philosophies, theories, and skills. Students will learn ways to communicate, lead change, work with teams, and resolve conflicts. Emphasis in this course is on developing a mindset of positive communication with others that results in change leadership and effective team work. The learner will participate in activities designed to improve their working knowledge and experience with leadership concepts, including reflections, leadership assessments, discussion, and presentation. |
| 688    | 1       | **Advanced Diabetes Care**  
*Dr. Kavanaugh* | Through application of diabetes knowledge and skills with hands-on techniques, case-based discussions, and evidence-based practice, this elective course is designed to provide students with exposure to advanced diabetes care and management topics. While the emphasis is on ambulatory or community practice settings, these skills can be applied to practice site where diabetes is managed. Students will receive the American Pharmacist Association (APhA) Pharmacist & Patient-Centered Diabetes Care Certificate at the end of this course. |

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