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School of Pharmacy

SYLLABUS Pharmacy Practice I PHAR 541 Fall 2014

This syllabus is not to be construed as a contract with the student and is subject to change.

The School of Pharmacy reserves the right to change the course syllabus. *The school should notify students through the course notification system or by email preferably through the Blackboard system.*

Some materials used in this class may be copyrighted and should not be shared with individuals not enrolled in this course.

Course Meeting Days and Time	Monday, Wednesday and Friday 9am-12pm
Location	Studio Classroom L04
Team Leader/Instructor	Brittany Riley, PharmD, BCPS
Office	152
Phone	304-696-7396
Email	warrick2@marshall.edu
Office Hours	Wednesdays 1pm-2pm

Faculty	Email	Office	Phone	Office Hours
Elaine Cruse, PharmD, BCPS	crusee@marshall.edu	149	304-696-7399	Wednesdays 12pm-1pm
Janet Wolcott, PharmD	wolcottj@marshall.edu	150	304-696-7337	Wednesdays 1pm-2pm

Student: If the instructor accepts appointments, then please email the instructor for availability. The student can expect the instructor to respond to emails and phone messages within 72 hours.

Course Description: Begin professional development through understanding the responsibilities of a registered pharmacist providing patient care. Professional conduct, personnel management, personal conduct, pharmacy calculations, the language of pharmacy practice, immunizations, legal issues, and team dynamics are stressed.

Prerequisites: P-1 Standing

Required Text Book:

Ansel HC. Pharmaceutical Calculations. 14th ed. Baltimore:Lippincott, Williams and Wilkins. 2011. ISBN: 978-1-4511-2036-3.

Course Objectives:

Number	Objective	Linkage to MUSOP Abilities	How Assessed
1	Demonstrate proficiency in pharmaceutical calculations	24	Homework assignments, Simulations, Examinations
2	Interpret the legal requirements for a prescription, patient profile and label in addition to rules and regulations for pharmacy internship in WV, OH and KY	37, 38, 39, 63	Simulations, IRAT/GRAT, Examinations
3	Define and assess HIPAA rules and regulations in application to the profession of pharmacy	63	IRAT/GRAT, Examinations
4	Model pharmacy professionalism and professional conduct	11, 22, 33, 35, 38, 39, 59, 57, 62	IRAT/GRAT, Examinations
5	Describe personal management	11, 15, 22, 27, 28, 35, 37, 39, 52, 57, 61, 63	IRAT/GRAT, Examinations
6	Demonstrate communication skills in the profession of pharmacy including interactions with patients and other health care professionals	15, 22, 37, 38, 39, 52	IRAT/GRAT, Examinations
7	Interpret pharmacy abbreviations and measurement correctly	23, 63	Simulations, IRAT/GRAT, Examinations
8	Describe pharmacists' relationships with other healthcare professionals	11,28	IRAT/GRAT, Examinations
9	Describe procedures and processes that are required to safely and accurately manipulate sterile products	23, 25, 33, 57, 63	IRAT/GRAT, Examinations
10	Demonstrate a basic understanding of components of pharmacy practice such as third-party payer systems, potential types of practice within pharmacy and medication classes and categories	10, 11, 30 , 59, 60	IRAT/GRAT, Examinations

Schedule of Activities: The course is taught by the PP1 team. The lead instructor for each session is listed first on the syllabus and any questions pertaining to individual session should be directed to that instructor. Pre-work for each class meeting will be posted at least 48 hours prior to the class session. The pre-work may consist of problems, readings and Camtasia recordings. Students are expected to complete the pre-work assignments before class. Class session will consist of didactic material and active learning events (ALEs). Learning readiness assessment in the form of Individual Readiness Assurance Tests (IRATs) and Group Readiness Assessment Tests (GRATs) will be performed for most class sessions. Graded activities and quizzes may be assigned as well as examinations as listed below.

Date	Meeting Location	Meeting Topic	Student Learning Outcomes	Instructor
Monday 8-25-14 9am-12pm	L04	Introduction to Sterile Products	<ul style="list-style-type: none"> • Define sterility and aseptic techniques (25) • Describe methods to reduce product contamination (25, 33) • Discuss beyond use dating or components and compounded products (25) • Demonstrate the proper donning of personal protective equipment and hand washing procedures (57) • Describe the types of rooms, hoods, and techniques used to provide an appropriate area for sterile product preparation (25, 33) • Discuss the components of an intravenous admixture program including aseptic technique, personnel training, cleaning, environmental and engineering controls and OSHA requirements (23, 33, 25, 63) 	Dr. Cruse (IRAT/GRAT)
Wednesday 8-27-14 9am-12pm	L04	Fundamentals of Pharmacy Calculations International System of Units Interpretation of Prescriptions and Medication Orders Density and Specific Gravity	<ul style="list-style-type: none"> • Convert common fractions, decimal fractions, and percentages to their corresponding equivalent expression (24) • Correctly apply the methods of ratio, proportion, and dimensional analysis (24) • Convert measures of the International Systems of Units and apply correctly in calculations (24) • List the components of a typical prescription and institutional medication order (23) • Correctly interpret standard abbreviations and symbols used on prescriptions and institutional medication orders (23) 	Dr. Riley

		Percentage, Ratio Strength and Other Expressions of Concentrations	<ul style="list-style-type: none"> • Perform intersystem conversions of weights and measures (24) • Define density and specific gravity, and determine each through appropriate calculations (24) • Apply specific gravity correctly in converting weight to volume and volume to weight (24) • Perform calculations correctly based on percent weight-in-volume, percent volume-in-volume, and percent weight-in-weight (24) • Perform calculations correctly involving ratio strength and percentage strength (24) 	
Friday 8-29-14 9am-12pm	L04	Professional Conduct and Professionalism Life-long Learning and Continuing Pharmacy Education	<ul style="list-style-type: none"> • Explain the association between professionalism and pharmacist's standards of conduct (22, 63) • Explore telephone and electronic etiquette (37, 52) • Describe the importance of self-assessing professionalism on an ongoing basis (39, 61) • Lists tips on professional meeting protocol and multicultural etiquette (28) • List tenets of professional conduct (15, 38) • Discuss the professional socialization process (11, 28, 61) • Discuss professionalism in the context of developing your personal brand (39) • Define how social media can affect your personal brand (61) • Demonstrate professional dress and appearance (57) • Describe the importance of continuing education (35, 61, 63) • Design a professional development plan (61, 62) 	Dr. Cruse (IRAT/GRAT)
Wednesday 9-3-14 9am-12pm	L04	Introduction to Medication Categories and Classes Cultural	<ul style="list-style-type: none"> • Define medication categories and classification systems (10, 60) • Discuss the components of medication categories (10, 60) • Identify medication classifications (10, 60) 	Dr. Riley Dr. Wolcott (IRAT/GRAT)

		Competency Pharmaceutical Measurement	<ul style="list-style-type: none"> Recognize and respect cultural differences (22) Discuss the impact of cultural beliefs on medication therapy (22, 38, 52) Describe instruments for volumetric measurement and the use of a pharmaceutical balance (23, 24) Perform correct calculations by the aliquot method (24) Define sensitivity requirement and apply it correctly in calculations (24) 	
Friday 9-5-14 9am-12pm	L04	Rules and Regulations of Internship in WV, OH and KY	<ul style="list-style-type: none"> Discuss the requirements for pharmacy licensure (37, 63) Compare and contrast internship rules and regulations for the states of KY, OH and WV (37, 39, 63) Demonstrate knowledge of KY, OH, and WV rules and regulations in regards to pseudoephedrine, ephedrine, and phenylpropanolamine products (38, 63) Distinguish between rules and regulations regarding vaccines in KY, OH and WV (63) Summarize the KY, OH and WV rules and regulations in regards to controlled substance monitoring programs (39, 63) 	Dr. Wolcott (IRAT/GRAT)
Friday 9-5-14 2pm-3pm	L04/L10	Examination 1	Material from 8-25-14 through 9-3-14	Dr. Riley Dr. Cruse Dr. Wolcott
Monday 9-8-14 9a-12pm	L04	Calculation of Doses	<ul style="list-style-type: none"> Correctly calculate doses based on factors of age, body weight and body surface area (24) Correctly calculate doses for single and combination chemotherapy regimens (24) Correctly perform calculations relevant to various drug doses and dosing regimens (24) Correctly perform calculations pertaining to the quantity of a dose, the dosage regimen, and the supply of medication required for the prescribed period (24) 	Dr. Riley

			<ul style="list-style-type: none"> • Correctly perform calculations of doses involving household measures (24) 	
Wednesday 9-10-14 9am-12pm	L04	<p>Personal Management</p> <p>Managers and Leaders</p> <p>Errors and Omissions #1 Due</p>	<ul style="list-style-type: none"> • List sources of employment information, advertisement, job descriptions (27) • Introduction to Marshall JobTrax and information regarding additional job search resources (27) • Define the purpose of professional liability insurance (39, 63) • Discuss appropriate job interview etiquette, questions and answers (27, 28, 35, 37) • Recommend strategies that a pharmacy can implement to avoid liability based on sexual harassment, ADA and EEOC (22, 63) • Cite common traits of an effective leader (11, 15) • Differentiate between leadership and management (11) • Develop your own leadership style (39, 61) • Demonstrate skills in evaluating information required in medication orders (23, 63) 	Dr. Wolcott Dr. Riley (IRAT/GRAT)
Friday 9-12-14 9am-12pm	L04	Medication and Patient Safety	<ul style="list-style-type: none"> • Define medication errors (11) • List potential strategies for identifying and reducing medication errors (33) • Discuss the impact of medication errors (38, 39) • Identify patient safety measures (11) 	Dr. Cruse (IRAT/GRAT)
Friday 9-12-14 2pm-3pm	L04/L10	Examination 2	Material from 9-5-14 through 9-10-14	Dr. Riley Dr. Cruse Dr. Wolcott
Monday 9-15-14 9am-12pm	L04	<p>Introduction to MTM and Patient Centered Medical Home</p> <p>Introduction to Pharmacy Payment Systems and Formularies</p>	<ul style="list-style-type: none"> • Identify the potential roles the pharmacist may play in the patient centered medical home (11, 59) • Discuss the pharmacist's role in medication therapy management (11, 59) • Define pharmacy reimbursement systems (30) • Distinguish between state and 	Dr. Wolcott (IRAT/GRAT)

			<p>federal prescription plans (30)</p> <ul style="list-style-type: none"> • Explain the concept of a formulary system (30) 	
<p>Wednesday 9-17-14 9am-12pm</p>	L04	<p>Selected Clinical Calculations</p> <p>Intravenous Infusions, Parenteral Admixtures, and Rate-of-Flow Calculations</p> <p>Basic Communication Skills</p> <p>Errors and Omissions #2 Due</p>	<ul style="list-style-type: none"> • Correctly calculate heparin doses and infusion rates from medication orders and standardized protocols (24) • Correctly calculate ideal body weight and apply in dose determination (24) • Correctly calculate estimated creatinine clearance rates and apply in dose determination (24) • Correctly perform calculations for adults and pediatric intravenous infusions (24) • Correctly perform calculations for intravenous fluids (24) • Correctly perform rate of flow calculations for intravenous infusions utilizing medication orders, standardized tables and nomograms (24) • Examine and demonstrate appropriate patient communication skills (15, 22, 38, 39) • Examine and demonstrate appropriate communication with other health care professionals (15, 22, 37) • Demonstrate skills in evaluation of information required in medication orders (23, 63) 	Dr. Riley
<p>Friday 9-19-14 9am-12pm</p>	L04	<p>Enteral and Parental Nutrition</p> <p>Reducing and Enlarging Formulas</p>	<ul style="list-style-type: none"> • Perform basic calculations for enteral and parenteral nutrition (24) • Correctly calculate body mass index from a standard formula (24) • Correctly apply the food nutrition label in related calculations (24) • Correctly perform calculations to enlarge or reduce formulas for pharmaceutical preparations stated in both metric quantities and proportional parts (24) 	Dr. Riley
<p>Friday 9-19-14 2pm-3pm</p>	L04/L10	Examination 3	Material from 9-12-14 through 9-17-14	<p>Dr. Riley Dr. Cruse Dr. Wolcott</p>
<p>Monday 9-22-14</p>	L04	Altering Product Strength, Use of	<ul style="list-style-type: none"> • Correctly perform calculations by 	Dr. Riley

9am-12pm		<p>Stock Solutions, and Problem Solving by Allegation</p> <p>Selected Calculations in Contemporary Compounding</p>	<p>altering product strength by dilution, concentration or fortification (24)</p> <ul style="list-style-type: none"> • Correctly perform calculations for the preparation and use of stock solutions (24) • Accurately apply allegation medical and allegation alternative in problem solving (24) • Accurately perform calculations for constitution of dry powders for oral and parenteral products (24) • Correctly perform calculations for the use of prefabricated dosage forms in compounding procedures (24) • Correctly perform calculations applied to the preparation of suppositories and capsules (24) 	
Wednesday 9-23-14	L04	<p>Isotonic and Buffer Solutions</p> <p>Electrolyte Solutions</p> <p>Calculations of Active Drug Moiety</p> <p>Pharmacy Disciplines, Careers and Organizations</p>	<ul style="list-style-type: none"> • Accurately calculate the dissociation factor and sodium chloride equivalent of a chemical agent (24) • Appropriately demonstrate by calculation whether a solution is hypotonic, isotonic or hypertonic (24) • Accurately perform calculations required in the preparation of isotonic solutions (24) • Accurately apply the buffer equation in pharmaceutical calculations (24) • Correctly calculate problems involving milliequivalents, millimoles, and milliosmoles (24) • Correctly calculate the percentage composition and active drug moiety portion of a chemical compound (24) • Identify 5 pharmacy societies and their focus in the profession of pharmacy (28) • Compare and contrast institutional/community/speciality practices (28) 	Dr. Riley (IRAT/GRAT)
Friday 9-26-14 9am-12pm	L04	<p>Legal Issues: HIPAA, Parts of Prescription,</p>	<ul style="list-style-type: none"> • Define the HIPAA Act of 1996 (63) • Apply HIPAA rules to patient care 	Dr. Wolcott (IRAT/GRAT)

		Patient Profiles, and Prescription Labels	(63) <ul style="list-style-type: none"> Identify appropriate disclosure of patient health information (63) Identify legal requirements of a prescription (63) Describe record keeping requirements for controlled and non-controlled substances (63) Identify legal requirements of patient medication profiles (63) Identify legal requirements of a prescription label (63) Compare and contrast auxiliary labels, patient package inserts, and risk evaluation and mitigation strategies (63) 	
Friday 10-3-14 Midnight	N/A	Errors and Omissions #3 Due	<ul style="list-style-type: none"> Demonstrate skills in evaluating information required in medication orders (23, 63) 	Dr. Riley
Monday 10-6-14 6pm-8pm	L04/L10	Final Examination	Cumulative	Dr. Riley Dr. Cruse Dr. Wolcott

Letter Grade Distribution: A=89.5% to 100%
 B=79.5% to 89.49%
 C=69.5% to 79.49%
 F=69.49% and below

Point Distribution:

Assessment	Percent
Active Learning Experiences	25%
Mid-Semester Exams *	20%
Final Exam *, **	20%
Quizzes	10%
Math Pre-Work	10%
Errors and Omissions Simulations	10%
Peer Assessment	5%
Total	100%

*MAJOR ASSESSMENT

** In order to pass the course you must have at least a 70% course grade and a 70% on the calculations portion of the final examination.

Course Evaluation (assessment):

Student Evaluation:

Survey: Each student will have the opportunity to evaluate each instructor as well as course content via the school's universal evaluation survey

Faculty Evaluation:

Faculty members participating in the course will attend class as often as possible to evaluate overall performance

Assignment and examination grades will be posted in Blackboard within 7 days unless otherwise stated.

Attendance Policy: Each student is required to attend class. Attendance is mandatory at graded events. Only excused absences are accepted-see university and school policies. In the event of an excused absence the student will be able to make up any IRATs or ALEs missed, however, given the nature of GRATs, GRATs will be unable to be made up. Once a student has received an excused absence any make-up work will be completed within 7 days or the student will forfeit the right to make-up those assignments.

Late-Work Policy: It is the expectation that all work is turned in on time according to the deadlines set forth in the syllabus and on assignment documents. Unless discussed with the instructor prior to the due date, 1% will be deducted from the assignment grade for each day the assignment is late.