

# NEW MEXICO STATE UNIVERSITY

Masters of Science in Clinical Psychopharmacology Degree

Program

## CLASS/MODULE #7 TRAINING OUTLINE

- Course #:** RXPP 603 Clinical Psychopharmacology I Cont.
- Title:** Introduction to Pathophysiology – The Hematology, Cardiology, Lymphatic Systems, and Associated Diagnostic Studies
- Credit Hours:** 3.0 Course Credit Hours
- Continuing Education:** 13.5 CE (Provided by SIAP, Sponsored by APA)  
*SIAP is approved by the American Psychological Association to sponsor continuing education for psychologists*  
*SIAP maintains responsibility for the program and its content*
- Location:** Live and online  
NMSU; 2915 McFie Circle, Las Cruces, NM  
Milton Hall, Room 085
- Class Meeting Date:** February 15<sup>th</sup>-16<sup>th</sup>, 2020  
8am-5pm
- Instructor(s):** Kathleen Hales, M.D.  
Dr. Kathleen Hales is a family medicine specialist in Las Cruces, NM and has been practicing for 31 years. She graduated from University Of New Mexico School Of Medicine in 1986 and specializes in family medicine.

### Required Readings:

- Margaris, K. & Black, R. A. (2012). Modelling the lymphatic system: challenges and opportunities. *Journal of the Royal Society, Interface*, 9(69), 601–612.
- Marano, G., Traversi, G., Romagnoli, E., Catalano, V., Lotrionte, M., Abbate, A., ... Mazza, M. (2011). Cardiologic side effects of psychotropic drugs. *Journal of Geriatric Cardiology*, 8(4), 243–253.
- McCance, K.L., Huether, S.E., Brashers, V.L., & Rote, N.S. (2014). *Pathophysiology: The biological basis for disease in adults and children* (7th ed.). Elsevier Health Sciences, New York. (Units VIII and IX).
- Paneni, F., Beckman, J. A., Creager, M. A., & Cosentino, F. (2013). Diabetes and vascular disease: pathophysiology, clinical consequences, and medical therapy: part I. *European Heart Journal*, 34(31), 2436–2446.

- Wiegersma, A. M., Dalman, C., Lee, B. K., Karlsson, H., & Gardner, R. M. (2019). Association of Prenatal Maternal Anemia With Neurodevelopmental Disorders. *JAMA psychiatry*, 76(12), 1294-1304.
- Wurst, K. E., Poole, C., Ephross, S. A., & Olshan, A. F. (2010). First trimester paroxetine use and the prevalence of congenital, specifically cardiac, defects: A meta-analysis of epidemiological studies. *Birth Defects Research Part A: Clinical and Molecular Teratology*, 88(3), 159–170.

**Class/Training Description:** This RXPP 603 class 7 focuses on Hematologic, Cardiovascular, and Lymphatic Systems. Many psychopharmacological agents have significant effects on these systems. The prescribing psychologist must be very familiar with the normal physiology and pathophysiology of these systems. The trainee will become familiar diagnostic testing with these systems. Hematology is the science or study of blood, blood-forming organs and blood diseases. In the medical field, hematology includes the treatment of blood disorders and malignancies, including types of hemophilia, leukemia, lymphoma and sickle-cell anemia. Interventional Cardiology is an area of medicine within the subspecialty of cardiology that uses specialized imaging and other diagnostic techniques to evaluate blood flow and pressure in the coronary arteries and chambers of the heart, as well as technical procedures and medications to treat abnormalities that impair the function of the cardiovascular system. Embedded within the discussion of cardiology is the lymphatic system, or lymphoid system. Which is an organ system (in vertebrates) that is part of the circulatory system and the immune system. Regarding the systems above, both adult and pediatric treatment populations will be lectured upon.

**Objectives:** By the end of the training students/trainings will:

1. List 3 compositional features of the Blood.
2. Recite at least 5 cellular components of the Blood.
3. Name 2 lymphoid organs of the lymphatic system.
4. Recall at least 3 processes of Hematopoiesis
5. Differentiate between 2 etiologic (pathophysiological) classifications of anemias.
6. Distinguish and contrast between 3 morphologic classifications of anemias.
7. Name at least 5 types of anemias and articulate each of their pathophysiological mechanisms.
8. Match the primary cause of at least 5 types of anemias to their corresponding name and pathophysiological mechanism.
9. Associate at least 6 laboratory studies/tests, and their values, to correct type of anemia.
10. List at least 5 drug classes in which anemias have resulted secondary to drug effects.
11. Name at least 1 acquired form and 1 hereditary form of hemolytic anemias.
12. Evaluate 2 features of acute and 2 features of chronic Leukemia.
13. Compare and contrast 4 subtypes of Hodgkin Lymphoma.
14. Name and articulate at least 3 types of thromboembolic diseases.
15. Classify at least 3 distinct alternations of hematologic function in children.
16. List 3 diseases of the veins.
17. Name at least 7 diseases of the arteries.
18. Differentiate between 4 disorders of the heart wall, and 2 manifestations of heart disease.
19. List at least 5 tests of cardiovascular function.
20. Match at least 5 indicators of cardiac function with their correct/corresponding common cause of abnormality.
21. Discuss the cardiovascular functioning in aging and older adults.
22. Classify at least 3 distinct alternations of cardiovascular function in children.

**Evaluation:** There will be a test/quiz (multiple choice, short answer or true/false) which will be available to students/trainings after the training weekend. A study guide may or may not be provided by the Instructed prior to training. Case studies assignments will be presented that involve dual diagnoses, medical, and/or psychological problems. Students will be expected to respond to the case study assignment in a timely, analytical manner. Students' experiential case studies will be graded on pass/fail with the expectation for a demonstration of a high-level competence of the biopsychosocial model of care. The grades on the standardized quizzes will constitute one-thirds of the grade; whereas the grade on the case studies and attendance equal two-third of the grade for the remainder of the course. Participations and engagement by the trainee will be observed. Students will be able to submit class evaluations about the class content and Instructor after the training weekend.

<b>Grading Assignments</b>	<b>Points Possible</b>
<i>Test (30 questions @ 1 pts each)</i>	<i>30 pts.</i>
<i>Case Study Assignment/Analysis</i>	<i>60 pts.</i>
<i>Participation/Attendance (live or via AdobeConnect)</i>	<i>10 pts.</i>

*Course grades:*  
 90-100 pts total = "A"  
 80-89 pts total = "B"  
 70-79 pts total = "C"

**Students with Disabilities:** *If you have or believe you have a disability, you may wish to self-identify. You can do so by providing documentation to the Office for Services for Students with Disabilities, located at Garcia Annex (telephone: 646-6840). Appropriate accommodations may then be provided for you. If you have a condition which may affect your ability to exit from the premises in an emergency or which may cause an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the director of Disabled Student Programs. If you have questions about the Americans with Disabilities Act (ADA), call 646-3635.*

**Student complaints:** *If students have a complaint about a course, they are advised to discuss their concerns directly with the instructor whenever possible. If that does not resolve the problem or if they cannot approach the instructor, students should either access NMSU's online complaint system at <https://dos.nmsu.edu/concerns/> or seek out the department head ([eadams@nmsu.edu](mailto:eadams@nmsu.edu)) for help resolving the problem. Both of these processes provide opportunities for the department head to know about issues that need attention and for instructors to receive information about student concerns so that they can respond.*

**Further Notice:** Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADAAA) covers issues relating to disability and accommodations. If a student has questions or needs an accommodation in the classroom (all medical information is treated confidentially), contact:

Trudy Luken, Director  
 Student Accessibility Services (SAS) - Corbett Center Student  
 Union, Rm. 208  
 Phone: (575) 646-6840  
 E-mail: [sas@nmsu.edu](mailto:sas@nmsu.edu)  
 Website: <http://sas.nmsu.edu/>

NMSU policy prohibits discrimination on the basis of age, ancestry, color, disability, gender

identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation and protected veterans status.

Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation. For more information on discrimination issues, Title IX, Campus SaVE Act, NMSU Policy Chapter 3.25, NMSU's complaint process, or to file a complaint contact:

Lauri Millot, Director and Title IX Coordinator  
Agustin Diaz, Associate Director, Title IX Deputy Coordinator  
Office of Institutional Equity (OIE)  
O'Loughlin House, 1130 University  
Avenue  
Phone: (575) 646-3635  
E-mail: [equity@nmsu.edu](mailto:equity@nmsu.edu)  
Website: <http://eeo.nmsu.edu>

**Other NMSU Resources:**

NMSU Police Department: (575) 646-3311  
www.nmsupolice.com  
NMSU Police Victim Services: (575) 646-3424  
NMSU Counseling Center: (575) 646-2731  
NMSU Dean of Students: (575) 646-1722  
For Any On-campus Emergencies: 911

**The Instructor of Record reserves the right to make changes in the syllabus and timeline of the class. As feasible, any changes will be made in advance and with student input.**