UNIVERSITY OF FLORIDA

COLLEGE OF NURSING

COURSE SYLLABUS

Fall 2014

COURSE NUMBER NGR 6054C, Section 5717

COURSE TITLE Advanced Health Assessment and Diagnostic  
 Reasoning for Neonatal Nurse Practitioners

CREDITS 4 [3 credits didactic, 1 credits laboratory (45 laboratory hours)]

PLACEMENT DNP Program: Neonatal Nurse Practitioner Track

COREQUISITES NGR 6140 Physiology and Pathophysiology for Advanced Nursing Practice

# FACULTY

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| --- | --- | --- | --- |
| Jacqui Hoffman, DNP, NNP-BC  [hoffmanjm@ufl.edu](mailto:hoffmanjm@ufl.edu)  DEPARTMENT CHAIR |  | Cell (727) 709 9211 | Office hours: Virtual on Adobe Connect, Tues. 1:00–2:00 PM; available for additional hours by appt |
| Susan Schaffer, PhD, ARNP-BC  Department Chair  [sdschaf@ufl.edu](mailto:sdschafr@ufl.edu)  Gainesville Campus | HPNP 2229 | Office 352-273-6366 | Available by appt |
| CAMPUS DIRECTOR JAX |  |  |  |
| Andrea Gregg, DSN, RN  Associate Professor  [greggac@nursing.ufl.edu](mailto:greggac@nursing.ufl.edu)  Jacksonville Campus | JAX  LRC, 3rd Floor | Office: 904-244-5172  Fax: 352-273-6568 | Available by appt |

COURSE DESCRIPTION This course provides the student with knowledge and clinical experience in advanced health assessment. Emphasis is on acquisition and analysis of relevant data for the development of a comprehensive and holistic assessment. Content and skills are applied in the health and illness assessment of the pre-term and term neonate/infants within the context of the advanced practice role. The major focus is on the symptom/health problem assessment in neonate/infants and interpretation of screening and diagnostic tests to formulate a differential diagnosis.

COURSE OBJECTIVES Upon completion of this course the student will be able to:

1. Demonstrate proficiency in performing comprehensive and focused health assessments.
2. Apply advanced health assessment techniques in the focused assessment of neonates/infants.
3. Recognize patterns of abnormal embryological and fetal growth and development including the genetic and environmental variables which influence those patterns.
4. Organize and present holistic health assessment data.
5. Differentiate normal physiological alterations from pathological findings.
6. Demonstrate proficiency in performing illness assessments based on selected symptoms.
7. Utilize the diagnostic reasoning process in the selection and interpretation of appropriate screening and diagnostic tests.
8. Select screening and diagnostic tests appropriate for neonates/infants.

COURSE SCHEDULE

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| --- | --- | --- | --- |
|  | Day | Time |  |
| Class | On-line | Classes are on Tuesdays from 10 am – 1 PM on Adobe Connect | |
| Seminar | On-line | Tuesday 2-4 on Adobe Connect (Sept 30, Oct 7, Oct 28) | |

There will be one on-campus class in November (date to be announced) where all students will complete the comprehensive physical exam.

E-Learning in Canvas is the course management system that you will use for this course. E-Learning in Canvas is accessed by using your Gatorlink account name and password at <http://lss.at.ufl.edu>. There are several tutorials and student help links on the E-Learning login site. If you have technical questions call the UF Computer Help Desk at 352-392-HELP or send email to [helpdesk@ufl.edu](mailto:helpdesk@ufl.edu).

It is important that you regularly check your Gatorlink account email for College and University wide information and the course E-Learning site for announcements and notifications.

Course websites are generally made available on the Friday before the first day of classes.

ATTENDANCE

Students are expected to attend the on-campus class and seminars. Students are encouraged to attend the synchronous classes and are expected to participate in the activities and discussions as listed in the course syllabus and on the course web-site. Timeframes for the posting and receiving of materials are listed in the course materials on the course web-site.

This course will use one of UF’s web hosted collaborative software applications (Adobe Connect and or Voice Thread) for lecture presentation and or assignments. These collaborative applications have the functionality of recording your text, audio and or video comments. If you do not want to be recorded please notify assigned faculty member prior to the first class. You do not need to provide a photo or use the video comment option, this is your choice. The recordings are accessed through web links provided by your faculty member and should not be share with anyone not enrolled in the course. The recordings are available to the class during the semester. The recordings will not be used in another course.

ACCOMMODATIONS DUE TO DISABILITY

Each semester, students are responsible for requesting a memorandum from the Disability Resource Center (<http://www.dso.ufl.edu/index.php/drc/>) to notify faculty of their requested individual accommodations. This should be done at the start of the semester.

COUNSELING AND MENTAL HEALTH SERVICES

Students may occasionally have personal issues that arise on the course of pursuing higher education or that may interfere with their academic performance. If you find yourself facing problems affecting your coursework, you are encouraged to talk with an instructor and to seek confidential assistance at the University of Florida Counseling and Wellness Center, 352-392-1575, visit their web site for more information: <http://www.counseling.ufl.edu/cwc/>.

STUDENT HANDBOOK

Students are to refer to the College of Nursing Student Handbook for information about College of Nursing policies, honor code, and professional behavior. <http://nursing.ufl.edu/students/student-policies-and-handbooks/>

ACADEMIC HONESTY

The University of Florida Student Conduct and Honor Code may be found at http://www.dso.ufl.edu/index.php/sccr/process/student-conduct-honor-code/

# TOPICAL OUTLINE

1. Principles of holistic assessment based on systems theory, including physiological, affective, and cognitive systems.
2. Advanced health assessment techniques, including risk assessment, screening tests, and diagnostic tests.
3. Organization of health and illness assessment data.
4. Verbal and written communication of health and illness assessment data.
5. Assessment for congenital anomalies, including family history, physical examination, and laboratory evaluation.
6. Risk assessment appropriate to prenatal and perinatal circumstances and gestational age.
7. Screening tests appropriate for the neonate/infants.
8. Diagnostic tests for presenting symptoms in the neonate/infants.

# TEACHING METHODS

Lecture, discussion, case studies, written materials, computer assisted instruction and audiovisual materials. This course will utilize a simulation lab for practice of assessment skills, not actual clinical settings with patients.

LEARNING ACTIVITIES

Online and class participation, case presentations, learning modules and exam.

EVALUATION METHODS/COURSE GRADE CALCULATION

Clinical Modules 35%

Clinical modules will be posted weekly based on the weekly schedule. These are short assignments that will be due before the start of class the following week. Assignments will not be accepted following that time. Each module will be discussed during class.

Comprehensive Examination (Take-home exam) 25%

Class participation 10%

Each student will present a case patient at the assigned seminar date/time. Criteria for grading will be included in course materials at beginning of term. Attendance at the seminars is mandatory.

Physical assessment of the neonate 30%

Each student will complete a comprehensive examination utilizing a simulation manikin. Criteria for physical assessment will be included in course materials at beginning of term. The student must demonstrate proficiency (74% or above) in the 15 minute check off in order to pass the course. If unable to demonstrate proficiency, a course grade of C- will be assigned regardless of scores achieved on other assignments and the course must be retaken to progress in the program.

Total 100%

Assignments will be graded within a 2 week period.

MAKE UP POLICY

Clinical modules are due prior to class and will not be accepted late except under extraordinary circumstances (such as illness or death in the family) since they will be discussed in class; the student should explain these circumstances to the course instructor **prior** to the scheduled assignment due date. All students are expected to attend the three seminars and the on-campus class. Students who have extraordinary circumstances preventing attendance should communicate these circumstances to the course instructor prior to the scheduled on-site class or seminars; a note from a healthcare provider may be required.

GRADING SCALE/QUALITY POINTS

A         95-100 (4.0)                C         74-79\* (2.0)

            A-        93-94   (3.67)              C-        72-73   (1.67)

            B+       91- 92 (3.33)              D+       70-71   (1.33)

            B         84-90   (3.0)                D         64-69   (1.0)

            B-        82-83   (2.67)              D-        62-63   (0.67)

            C+       80-81   (2.33)              E          61 or below (0.0)

\*\* 74 is minimal passing grade

For more information on grades and grading policies, please refer to University’s grading policies: http://gradcatalog.ufl.edu/content.php?catoid=4&navoid=907#grades

FACULTY EVALUATION

            Students are expected to provide feedback on the quality of instruction in this course based on ten criteria.  These evaluations are conducted online at <https://evaluations.ufl.edu>.  Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open.  Summary results of these assessments are available to students at <https://evaluations.ufl.edu>.

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# REQUIRED TEXTBOOKS

Cloherty, J., Eichenwald, E., Hansen, A. & Stark, A. (2012). *Manual of Neonatal Care*, (7th ed.). Lippincott, Williams & Wilkins. ISBN-13: 978-1-60831-777-6.

Tappero, E. P., & Honeyfield, M. E. (2009). *Physical Assessment of the Newborn: A comprehensive approach to the art of physical examination.* Santa Rosa, CA: NICU Inc Book Publishers. ISBN-10 1887571175

WEEKLY CLASS SCHEDULE

Classes are on Tuesday via Adobe Connect; content will be announced at the beginning of the term on course website.

Approved: Academic Affairs Committee: 10/11; 07/13

Faculty: 11/11; 08/13

UF Curriculum: 11/12; 10/13

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| **Date** | **Topic/ Laboratory** | **Reading/ Online modules** |
| Week 1  August 26th | Introduction to course  Obtaining histories/interviewing  Cultural assessment  Radiologic interpretation  F/E/N assessment: Calculation of feedings | Tappero, Chapter 2  Corzine, M. (2011). Radiology case study: Part 1, Case presentation. *Neonatal Network,* 30(3): 180-181.  Corzine, M. (2011). Radiology case study: Part 2, Diagnosis and discussion. *Neonatal Network,* 30(3): 183-187.  **Module 1: F/E/N #1, X-ray #1** |
| Week 2  September 2nd | Genetics  Pedigree construction  Prenatal and Perinatal assessment: Evaluation of Fetal Maturity and Well-Being  Lab Assessment:  Gestational age assessment  Lab Assessment: Umbilical cord gas | Cloherty Chapters 1, 7, 8, and 10  Beck, C., & Rubarth, L. (2014). Genetic testing in infants. *Neonatal Network,* 33(4): 217-220.  Rubarth, L. (2012). The APGAR score: Simple yet complex. *Neonatal Network,* 31(6): 169-176.  Gestational age assessment video: there are 5 chapters  <http://www.youtube.com/watch?v=-Q0tpBHkY7M>  **Module 2: Gestational age assessment, Lab #1** |
| Week 3  September 9th | Principles of Physical Assessment  Health assessment of the Skin  F/E/N assessment: IVF calculations | **Physical Assessment video:**  **http://www.youtube.com/watch?v=hW3n9seV4SY**  Cloherty, Chapter 63  Tappero, Chapters 1 and 4  **Additional article will be posted in the course folder if you need additional support of this topic**  **Module 3: F/E/N #2, X-ray #2** |
| Week 4  September 16th | Health assessment of the Head, eyes, ears, nose, mouth , and neck (HEENT)  F/E/N assessment: Calculation of IVF & feedings | Tappero, Chapter 5  Merritt, L. (2009). Recognizing craniosynostosis. *Neonatal Network,* 28(6): 369-376.  Parker, L. (2005). Part 1: Early recognition and treatment of birth trauma: injuries to the head and face. *Advances in Neonatal Care*. 5(6):288-97.  **Additional articles will be posted in the course folder if you need additional support of this topic**  **Module 4: F/E/N #3, X-ray #3** |
| Week 5  September 23rd | Health Assessment of the Immune System  Lab Assessment: CBC, diff and platelets; CRP  Culture and Gram Stain  Lab assessment: LP results; Gram stain and cultures | Cloherty, Chapter 49, 66 (pages 854-856).  Chadwick, S., Wilson, J., Levin, J. & Martin, J. (2011). Cerebrospinal fluid characteristics of infants who present to the emergency department with fever: Establishing normal values by week of age. *Pediatric Infectious Disease Journal,* 30: e63-7.  Christensen, R., Henry, E., Jopling, J., & Wiedmeier, S. (2009). The CBC: Reference ranges for neonates. *Seminars in Perinatology,* 33: 3-11.  Eslami, S., Nassirian, H., Mojgan, B., et al. (2012). Comparison of cerebrospinal fluid in newborns and in infants ≤ 2 months old with or without meningitis. *Pediatric International,* 54: 336-40.  Milcic, T. (2010). The complete blood count. *Neonatal Network*, 29(2), 109-15.  Hawk, M. (2008). C-reactive protein in neonatal sepsis. *Neonatal Network*, 27(2), 117-20.  Pacatte, K. (2008). Analysis of CSF in the neonate. *Neonatal Network,* 27(6), 419-422  **Supplemental readings**  Chiesa, C., Natale, F., Pascone, R., et al. (2011). C reactive protein and procalcitonin: Reference intervals for preterm and term newborns during the early neonatal period. *Clinica Chimica Acta,* 412: 1053-9.  Christensen, R., Baer, V., Gordon, P. et al. (2012). Reference ranges for lymphocyte counts of neonates: Associations between abnormal counts and outcomes. *Pediatrics,* 129: e1165-72.  Hoher, N., Zacharias, E., Muller, W., & Resch, B. (2012). An update on the use of C-reactive protein in early-onset neonatal sepsis: Current insights and new tasks. *Neonatology,* 102: 25-36.  Hornik, C., Benjamin, D., Becker, K., Benjamin, D. Jr, et al. (2012). Use of the complete blood cell count in early-onset neonatal sepsis. *Pediatric Infectious Disease Journal,* 31: 799-802.  Hornik, C., Benjamin, D., Becker, K., Benjamin, D. Jr, et al. (2012). Use of the complete blood cell count in late-onset neonatal sepsis. *Pediatric Infectious Disease Journal,* 31: 803-807.  Murphy, K. & Weiner J. (2012). Use of leukocyte counts in evaluation of early-onset neonatal sepsis. *Pediatric Infectious Disease Journal,* 31: 16-9.  Srinivasan L. & Harris, M. (2012). New technologies for the rapid diagnosis of neonatal sepsis. *Current Opinion in Pediatrics,* 24: 165-71  **Module 5: Lab #2, #3, and #4, X-ray #4** |
| Week 6  September 30th  Class 10 AM – 1 PM  Seminar  2-4PM | Health assessment of the Chest and Lungs  Lab assessment: ABG interpretation  Lab assessment: Electrolytes, anion gap  FEN assessment: TPN | Cloherty, Chapters 23 and 30  Tappero, Chapter 6  Brown, B. and Eilerman, B. (2006). Understanding blood gas interpretation, *Newborn and Infant Nursing Reviews*. 6(2), 57-62.  Johnson, P. (2014). Review of micronutrients in parenteral nutrition for the NICU population. *Neonatal Network,* 33(3): 155-161.  Mandell, I. (2009). Serum anion gap in metabolic acidosis. *Neonatal Network*, 28(4):252-4.  Nash, P. (2007). Potassium and sodium homeostasis in the neonate. *Neonatal Network*, 26(2), 125-132.  Raney, M., Donze, A., & Smith, J. (2008). Insulin infusion for the treatment of hyperglycemia in low birth weight infants: Examining the evidence. *Neonatal Network,* 27: 127-140.  Scheans, P. (2011). Umbilical cord blood gases: New clinical relevance for an age-old practice, *Neonatal Network,* 30(2): 123-126.  Shaw, A. (2008). [Bicarbonate and chloride equilibrium and acid-base balance in the neonate.](http://www.ncbi.nlm.nih.gov.lp.hscl.ufl.edu/pubmed/18697656) *Neonatal Network,* 27(4): 261-6.  **Module: Heart and Lung sounds**  [**http://www.med.ucla.edu/wilkes/intro.html**](http://www.med.ucla.edu/wilkes/intro.html)  **Additional articles will be posted in the course folder if you need additional support of this topic**  **Module 6: Lab #5 and #6, F/E/N #4 and #5, X-ray #5** |
| Week 7  October 7th  Class 10 AM – 1 PM  Seminar  2-4PM | Health Assessment of the Cardiovascular system  Lab assessment: Echo, EKGs, and Pulse oximetry  F/E/N assessment: TPN (Cont) | Cloherty, Pages 478-486, 488-491.  Tappero, Chapter 7  Federspiel, M. (2010). Cardiac assessment in the neonatal population. *Neonatal Network*, 29(3), 135-141.  Liebman, J. (2010). The normal electrocardiogram in the newborn and neonatal period and its progression. *Journal of electrocardiology,* 43: 524-29.  Mahle, W., Newburger, J., Matherne, G., Smith, F., et al. (2009). Role of pulse oximetry in examining newborns for congenital heart disease: A scientific statement from AHA and AAP. *Pediatrics,* 124: 823-836.  Nash, P. (2008). Brain type natriuretic peptide. *Neonatal Network,* 27: 343-346.  Ottinger, D. & Nash, P. (2013). Troponin. *Neonatal Network,* 32(5): 365-368.  **Additional articles will be posted in the course folder if you need additional support of this topic**  **Module 7: F/E/N #6, Lab #7, X-ray #6** |
| Week 8  October 14th | No formal class  FANNP conference |  |
| Week 9  October 21st | Health assessment of the Abdomen  Lab assessment: LFTs | Tappero, Chapter 8  Nash, P. (2009). [Transthyretin (aka Prealbumin): why is it part of TPN labs?](http://www.ncbi.nlm.nih.gov.lp.hscl.ufl.edu/pubmed/19720599) *Neonatal Network*, 28(5), 339-41.  Parker, L. (2006). Part 2: Birth trauma: Injuries to the intraabdominal organs, peripheral nerves, and skeletal system. *Advanced in Neonatal Care,* 6(1): 7-14.  Rubarth, L. (2011). Blood types and ABO incompatibility. *Neonatal Network,* 30(1): 50-53.  **Additional articles will be posted in the course folder if you need additional support of this topic**  **Module 9: Lab #8, X-ray #7 and #8** |
| Week 10  October 28th  Class 10 AM – 1 PM  Seminar  2-4PM | Health assessment of the Genitourinary system  Lab assessment: Urine Analysis, urine culture | Cloherty, Pages 353-361.  Tappero, Chapter 9  Hardy, P. (2010). Urinalysis interpretation. *Neonatal Network,* 29(1), 45-49.  Knobel, R. & Smith, J. (2014). Laboratory blood tests useful in monitoring renal function in neonates. *Neonatal Network,* 33(1): 35-40.  Ottinger, D. (2013). Bronze baby syndrome. *Neonatal Network,* 32(3): 200-202.  **Additional article will be posted in the course folder if you need additional support of this topic**  **Module 10: Lab #9, X-ray #9** |
| Week 11  November 4th | Health assessment of the Neurologic system and Cranial nerves  Lab assessment: Hct, retic and bilirubin | Tappero, Chapter 11  Brand, M. (2008). Examination of the newborn with congenital scoliosis. *Advances in Neonatal Care,* 8(5): 265-273.  Brand, M. (2006): Part 1: Recognizing neonatal spinal cord injury. *Advances in Neonatal Care,* 6(1): 15-24.  Brand, M. (2006). Part 2: Examining the newborn with an open spinal dysraphism. *Advances in Neonatal Care,* 6(4): 181-196.  Brand, M. (2007). Part 3: Examination of the newborn with closed spinal dysraphism. *Advances in Neonatal Care,* 7(1): 30-40.  Lavety, S. & Randall, K. (2008). Cerebral monitoring of the term infant. *Neonatal Network,* 27(5): 329-337.  **Module 11: Lab #10, X-ray #10 and #11** |
| Week 12  November 11th | Health assessment of the Musculoskeletal system  Lab assessment: Clotting factors | Cloherty, Pages 540-543  Tappero, Chapter 10  **Additional article will be posted in the course folder if you need additional support of this topic**  **Module 12: Lab #11, X-ray #12** |
| Week 13  November 18th  **On-site Class**  Drs. Hoffman & Parker  8:00 – 12:30 G307  1:30 – 4:00 CG-67 | Clinical presentation  Final physical exam | Class handouts  **Physical Assessment video:**  [**http://www.youtube.com/watch?v=hW3n9seV4SY**](http://www.youtube.com/watch?v=hW3n9seV4SY) |
| Week 14  November 25th | Health assessment of the Behavioral system  Developmental Care in the NICU  Lab assessment: Thyroid fx | Cloherty, Chapter 3  Tappero, Chapter 12  Knobel, R. (2007). [Thyroid hormone levels in term and preterm neonates](http://www.ncbi.nlm.nih.gov.lp.hscl.ufl.edu/pubmed/17710960), *Neonatal Network,* 26(4), 253-9.  Schmaltz, C. (2012). Thyroid hormones in the neonate: An overview of physiology and clinical correlation. *Advanced in Neonatal Network,* 12(4): 217-222.  **Module 14: Lab #11, x-ray #13** |
| Week 15  December 2nd | Wrap up of any outstanding modules | Work on final exam |
| Week 16  Week of December 9th | Finals week | Final exam due |