

**Wright State University
College of Nursing & Health
Fall 2013**

COURSE NUMBER: NUR 7102-C90 & C91

COURSE TITLE: *Advanced Pathophysiology across the Lifespan for Advanced Nursing Practice*

PLACEMENT IN CURRICULUM: Master's Program

PREREQUISITES: Graduate standing or permission of instructor

COURSE LOCATION AND CLASS TIMES: Online

CATALOG DESCRIPTION: An in-depth scientific knowledge base is explored relevant to selected pathophysiological states across the lifespan confronted by graduate nurses. This course provides a basis for the foundation of clinical decisions related to selected diagnostic tests and the initiation of therapeutic regimens. Pathophysiology is correlated to clinical diagnoses and management.

CREDIT HOURS: 3 semester credits

COURSE WEB SITE: <https://pilot.wright.edu/>

You are responsible for checking your WSU e-mail and the course message page at least bi-weekly.

COURSE FACULTY: Tracy L. Brewer, DNP, RNC-OB, CLC
112 University Hall
Office Phone: 775-2595 Cell Phone: 513-382-8528
Office Hours: Virtual (Elluminate) or office: Monday 2pm-4pm or by appointment
tracy.brewer@wright.edu

COURSE OBJECTIVES:


1. Analyze the interrelationships of biopsychosocial phenomena and physiologic processes.
2. Examine the relationship between physiological conditions and client responses.
3. Apply knowledge of advanced pathophysiology to clinical care situations.
4. Discuss research findings for application to clinical practice.
5. Analyze medical management of disease process and resulting nursing responsibilities.
6. Explore health care variations related to developmental, racial, ethnic and cultural differences.

TEXTBOOKS

Required:

McCance, K.L. and Huether, S.E. (2010). *Pathophysiology: The Biologic Basis of Disease in Adults and Children* (6th ed.) St. Louis, MO: Mosby.

TEACHING METHODS:

Course readings, lecture, guest lectures, pathophysiological case studies & online discussion boards, quizzes, and final comprehensive exam. Audio files will be found in  **Egrity**.

COURSE REQUIREMENTS:

1. Class attendance online and participation in discussions are important components of the learning experience. As with any technology, do not solely rely on audio recordings for class content, you must read!
2. Case study development and discussion analyzing the pathophysiological process of a selected pediatric and or adult diseases.
3. Quizzes and Comprehensive Final Exam

EVALUATION:

	3 Credit Hours
Pathophysiology Discussion/Case Studies (3)	30%
Quizzes (6)	30%
Comprehensive Final Exam 12/11/2013 0800-1159PM	40%
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Total course:	100 %

Failure to complete a quiz, discussion, or exam will result in a zero, unless otherwise approved by your faculty.

GRADING SCALE:

- A = 90-100%
- B = 80-89%
- C = 70-79%
- D = 60-69%

QUIZZES:

There are six (6) total quizzes over the semester, please see topical outline for date & time of quizzes. **All quizzes will be on Wednesday's opening at 0800 am and closing at 1159 pm (EST).** Each quiz will be **20 questions with a 30-minute time limit.** All quizzes will be taken in Respondus Lock Down Browser. **(Please see separate instructions for installing and using Respondus Lock Down Browser in the instructions area of Pilot).** No copying of quizzes will be permitted and students are to work *independently* on the quizzes. **Any known violations will be viewed as academic dishonesty and could constitute grounds for referral to the office of Community Standards (<http://www.wright.edu/students/judicial/conduct.html>) and possible failure in the course.** To review quizzes you must make an appointment with the faculty.

FINAL EXAM:

The final exam will be comprehensive over content from the entire semester. **The final exam is on Wednesday December 11th from 0800-1159PM, EST.** You will have **2 hours to complete the 100-question final exam** using Respondus Lock Down Browser. The same academic integrity directions apply for the exam as discussed in the quizzes section above.

CASE STUDY DISCUSSIONS (3 total): "Mystery Diagnosis Unknown"

The faculty will assign individual students (6-8 students/depending on class size) starting **week 4** to lead class discussions by posting an individual case scenario for the remainder of the class to respond to regarding the content from course lectures. There will be 3-4 groups with a mixture of PNP, CNS, FNP, school nurses, and nursing education students. (Your content assignment will be made by random assignment). A spreadsheet will be posted on Pilot under the syllabus for which discussion week you are to post a case and which discussion week you respond to a case and group assignment.

The case study should include:

- **Patient age, gender, current condition and clinical manifestations, past medical history, vital signs, and any pertinent lab or radiology data** (You can use a real case from practice, but do not give the diagnosis or personal identifying patient information!). Don't give too much information to begin with! *A few sample case scenarios will be posted on Pilot as examples.*

Remaining students will be expected to make a substantial contribution to 1 case study (Choose a topic of interest or something you want to learn more about when responding to a case study) by asking probing questions to come up with making a **probable conclusion of the disease state**. You should ask clarifying questions for each case prior to making your final case response. Once you feel you have a diagnosis you will place a typed response in the provided drop box which includes your **understanding of the pathogenesis of the disease and based on the pathogenesis why you would see manifestations of the suspected disease/syndrome. In addition discuss any added diagnostic testing you would like to see (why) and any added personal experience with the diagnosis or a similar condition.** Your discussion response is to **include supportive references (at least 3), for example your textbook, web site link (reputable organizations or guidelines, not Wikipedia), or peer-reviewed journal article citations.** Make sure to use APA 6th edition for referencing any information that is not your original work within the response.

The week you are assigned to **post** your case scenario you are **responsible for responding to students** who are asking you clarifying questions related to your case. In addition, the **answer to the case needs to be posted after the due date for the group to see** if they correctly identified the disease, pathogenesis, interpretations of lab or other testing results, and manifestations of the disease.

Discussion postings of case scenario's and responses will be evaluated on quantity and quality by the faculty according to the grading rubric below, not whether or not you chose the correct disease state. Feedback will be given to individual students. **Case scenario's need to be posted by assigned student on Friday at 8:00 am (EST) and responses by classmates are to be submitted to the drop box by the following Wednesday at 8:00 am (EST). The faculty will not evaluate late postings.**

****Note: this course is not a management or treatment of care course. Do not include treatment of the specified disease/syndrome in your discussion.** However, if there is something of interest that adds depth to the discussion that you would like to share that would be acceptable. For example, it is difficult to discuss Type I diabetes mellitus without referring to insulin.

All case study responses will go through turitin.com to detect any plagiarism issues. It is at the discretion of the faculty to determine academic integrity issue related to plagiarism and make the appropriate referral to the office of Community Standards.

ACADEMIC INTEGRITY: Refer to the *CONH Graduate Student Handbook* under the heading: Academic Standards (p. 63) for policies related to academic dishonesty, including plagiarism. Penalties for academic dishonesty and student procedure in academic dishonesty prosecution are clarified in the *Wright State University Student Handbook* and on the Office of Community Standards & Student Conduct website at <http://www.wright.edu/students/judicial/academic-integrity-student-guide.pdf>

- **All written assignments in this course are expected to reflect the individual student's critical thinking; therefore, students are to submit only work for which they are solely responsible. ALL WRITTEN ASSIGNMENTS WILL BE AUTOMATICALLY SUBMITTED TO TURNITIN FOR EVALUATION OF ORIGINALITY. ANY STUDENT WHO HAS SUBMITTED WORK THAT IS HIGHLY SUSPECT MAY BE SUBJECT TO A REFERRAL TO THE OFFICE OF COMMUNITY STANDARDS & STUDENT CONDUCT AND COULD RECEIVE A 0 IN THE COURSE IF ACADEMIC INTEGRITY IS AN ISSUE.**
- ***Please be aware that a sentence that is minimally changed (only a few words are changed, added, or subtracted) is not paraphrasing – it is plagiarism. Direct quotes require quotation marks and correct citations with page numbers. Paraphrasing also requires citations and should have page numbers.***
- See APA 6th edition pp. 15-16 regarding plagiarism and pp.169-192 regarding quotations, paraphrasing, and citations.
- Papers and assignments, or portions of papers and assignments, done for another nursing course by you or another student will not be accepted for credit in this course. Material downloaded from the Internet must be properly cited, referenced in the reference list, and must come from a reputable web site. Wikipedia is NOT a reputable source for your academic work.
- **Any student with a 4% or greater individual match found on Turnitin.com report could be subject to a referral to the Office of Community Standards & Student Conduct and could receive a 0 in the course if academic integrity is an issue.**

COMPUTER/TECHNICAL DISCLOSURE (IMPORTANT TO READ):

If you are having **ANY** computer/technical difficulties please contact the **HELP Desk** at 937-775-4827 OR 1-888-775-4827 or email to: helpdesk@wright.edu

Your faculty is **not** an expert in trouble shooting Pilot, Respondus Lock Down Browser, or computer programs of any type from an urgent telephone call or email. The quickest way to resolve technical issues is by using the resources at the **HELP Desk**. Please **DO NOT** wait until the last hour prior to a quiz or discussion board to find out you are having computer difficulties. Allow yourself ample time to trouble shoot, as well as, complete the assignment in the time allotted.

CLASS SCHEDULE and REQUIRED READINGS NUR 7102-C90 & C91

DATE	TOPIC AREA	Required Reading
August 26 th Week 1	Introduction to course Mechanisms of disease Cell physiology and adaptation Fluid/Electrolyte & Acid/Base Balance (Review) Embryology (Review) Speaker: Tracy L. Brewer, DNP, RNC	Readings: Chapter 1-5 Article: Moore, C.A., Khoury, M.J., & Bradley, L.A. (2005). From genetics to genomics: Using gene-based medicine to prevent disease and promote health in children. <i>Seminars in Perinatology</i> , 29, 135-145. Khoury, M. (2003). Genetics & genomics in practice: The continuum from genetic disease to genetic information in health and disease. <i>Genetics in Medicine</i> , 5(4), 261-268. Video: <i>Life's Greatest Miracle</i>
September 2 nd Week 2	Mechanisms of Self-Defense Innate immunity/inflammation Adaptive Immunity Infection Speaker: Tracy L. Brewer, DNP, RNC	Readings: Chapter 6,7,8,9
September 9 th Week 3	Alterations of Cardiovascular Function in Adults & Children Speaker: Tracy L. Brewer, DNP, RNC <u>Quiz #1 covers week 1 & 2</u> <u>9/11/13 0800-1159PM (EST)</u>	Readings: Chapter: 29, 30, & 31 Article: May, A.L., Kukiina, E.V. & Yoon, P.W. (2012). Prevalence of cardiovascular disease risk factors among US adolescents, 199-2008. <i>Pediatrics</i> , 129(6), 1035-1041.
September 16 th Week 4	Alterations of Cardiovascular Function....continued Speaker: Kristine A. Scordo, PhD, RN, ACNP-BC	Article: Madriago, E. & Silberbach, M. (2010). Heart failure in infants & children. <i>Pediatrics in Review</i> , 31, (1), 4-11. Lecture: Adults: The Heart as Pump; Coronary Circulation; Acute Coronary Syndromes; Electrical Impulse Formation and Conduction; Heart Failure; Cardiogenic Shock
September 23 rd Week 5	Alterations in Pulmonary Function in Adults & Children Speaker: Tracy L. Brewer, DNP, RNC <u>Discussion Case Study #1 covers week 1-4</u> <u>Post case study 9/20/13 @ 0800</u> <u>Response to drop box 9/25/13 0800</u>	Readings: Chapters 32,33, & 34 Article: Dzierba, A.L. et al., (2011). A practical approach to understanding acid-base abnormalities in critical illness. <i>Journal of Pharmacy Practice</i> , 24(1), 17-26.
September 30 th Week 6	Alterations in Pulmonary Function in Adults & Children cont..... Speaker: Kristine A. Scordo, PhD, RN, ACNP-BC <u>Quiz #2 covers week 3 & 4</u> <u>10/2/13 0800-1159PM (EST)</u>	Lecture: Adult: Pulmonary Physiology; Ventilation, Perfusion, Gas Exchange and Transport; Acid-Base Physiology & Interpretation of Arterial Blood Gases, Pulmonary Disorders
October 7 th Week 7	Alterations of Renal and Urinary Function in Adults & Children Speaker: Tracy L. Brewer, DNP, RNC Acute and Chronic Kidney Disease in Adults Guest Lecture: Jeff Kaufhold, MD <u>Quiz #3 covers week 5 & 6</u> <u>10/9/13 0800-1159PM (EST)</u>	Readings: Chapters 35-37 Article: Puzantian, H.V. et al. (2013). Understanding kidney function assessment: the basics and advances. <i>AACN Advanced Critical Care</i> , 21(4), 350-356.
October 14 th Week 8	Alterations of the Reproductive Systems & Sexually Transmitted Infections Guest Lecture: Crystal Hammond, MS, CNM	Readings: Chapters 23-24

DATE	TOPIC AREA	Required Reading
October 21 nd Week 9	Alterations of Neurologic Function in Adults & Children Temperature Regulation, Fever, and Pain Speaker: Tracy L. Brewer, DNP, RNC <u>Discussion Case Study #2 covers week 5-8</u> <u>Post case study 10/25/13 @ 0800</u> <u>Respond by 10/30/13 0800</u>	Readings: Chapters 14, pg. 496-502,16,17 & 19
October 28 th Week 10	Alterations of Neurologic Function in Adults & Children Temperature Regulation, Fever, and Pain cont... <u>Quiz #4 covers week 7 & 8</u> <u>10/24/2012 0800-1159PM (EST)</u>	Article: Marchand, S. (2008). The physiology of pain mechanisms: from periphery to the brain. <i>Rheumatic Disease Clinics of North America</i> , 24, 285-309
November 4 th Week 11	Cellular Proliferation: Cancer in Adults & Children Alterations in Hematologic Function in Adults & Children Speaker: Tracy L. Brewer, DNP, RNC Kristine A. Scordo, PhD, RN, ACNP-BC	Readings: Chapter 11-13, 25-27 Article: Rieger, Paula. (2004). The Biology of Cancer Genetics. <i>Seminars in Oncology Nursing</i> , 20(3), 145-154
November 11 th Week 12	Alterations in Endocrine Function in Adults & Children Speaker: Tracy L. Brewer, DNP, RNC Kristine A. Scordo, PhD, RN, ACNP-BC <u>Quiz #5 covers week 9-11</u> <u>11/13/13 0800-1159PM (EST)</u>	Readings: Chapter 15, 20, & 21 Articles: Renn, C., Dorsey, S. (2005). The physiology and processing of pain: A review. <i>AACN Clinical Issues</i> , 16(3), 277-290. ADA (2009). Diagnosis and Classification of Diabetes Mellitus. <i>Diabetes Care</i> , 32(2), 562-567. McFarlane, K. (2011). An overview of diabetic ketoacidosis in children. <i>Paediatric Nursing</i> , 23(1), 14-19.
November 18 th Week 13	Alterations of Digestive Function in Adults & Children Speaker: Tracy L. Brewer, DNP, RNC <u>Discussion Case Study #3 covers week 9-12</u> <u>Post case study 11/22/13 @ 0800</u> <u>Respond by 11/27/13 0800</u>	Readings: Chapter 38-40
November 25 th Week 14	Neurobiology of Schizophrenia Mood Disorders and Anxiety Disorders Guest Lecture: Anita Dempsey, PhD, RN, CNS	Readings: Chapter 18 NO CAMPUS CLASSES THANKSGIVING HOLIDAY: November 27-29 th
December 2 nd Week 15	Shock, Multiple Organ Dysfunction in Adults & Children Adult: Shock Syndromes, Sepsis & Multi System Organ Failure (MODS) Speaker: Tracy L. Brewer, DNP, RNC Kristine A. Scordo, PhD, RN, ACNP-BC <u>Quiz #6 covers week 12-14</u> <u>12/4/13 0800-1159PM (EST)</u>	Readings: Chapter 46-47 Articles: Arian, A.A. & Citak, A. (2008). Pediatric Shock. <i>Signa Vitae</i> , 3(1), 13-23. Scheetz, L. (2011). Life-threatening injuries in older adults. <i>AACN Advanced Critical Care</i> , 22(2) 128-139. Nowak, T.J. (2012). Burn pathophysiology. <i>Perioperative Nursing Clinics</i> , 7(1), 9-17.
December 9 th	Finals Week: <u>12/11/13 0800-1159PM (EST)</u>	Comprehensive Final Exam (Includes week 15 content) 5 extra credit questions on final!!!!

CONTENT and POSSIBLE POINTS	PATHOPHYSIOLOGY CASE STUDY RUBRIC (10 POINTS EACH)			
Quality of contribution to each case scenario is demonstrated by the following: <ul style="list-style-type: none"> • Integrate concepts from the course readings/lessons into discussion. • Demonstrate understanding of the pathogenesis and manifestations of specified disease/syndrome • Discussion of diagnostic criteria for specified disease/syndrome • Share personal experiences to add depth to the case scenario. If no experience discuss similar condition or experience. • Present evidence to support response by providing reputable websites or literature to support discussion of case scenario topic/diagnosis using APA 6th ed. formatting. 	All responses are well developed, with in-depth explanations, clear descriptions, insightful, succinct with use of a logical structure appropriate to the case presented. Responses show significant individual thought. Multiple relevant references are incorporated into case study response.	Responses are fairly well developed, some descriptions vague or inadequate. Occasional confusion is noted and may have minor lapses in the development of the question asked. Moderate amount of individual thought. Literature citations appropriate.	Poorly developed, superficial information, inaccurate information, information not supported by appropriate literature citations. Random organization, lacking internal paragraph coherence and using few or inappropriate transitions. Minimal amount of individual thought.	No appreciable organization; lacks transitions and coherence. Does not respond to the assignment, lacks a central idea and neglects to use sources where necessary. Lack of individual thought.
Possible points	8	6	4	0
<i>Student's points</i>				
Grammar & writing style	minimal to no mechanical errors in grammar & writing style	occasional errors in grammar & writing style	numerous errors in grammar & writing style	Multiple errors that renders the paper impossible to comprehend
APA Style	consistent use of appropriate APA style	some errors in APA style	many errors in APA style	APA not used
Possible points	2	1	.5	0
<i>Student's points</i>				

Wright State University-Miami Valley
College of Nursing
NUR 7102 *Advanced Pathophysiology across the Lifespan for Advanced Nursing*
Practice

Please complete and place in drop box by August 30th 1159PM (EST)

Name: _____

Current track in graduate program: _____

If not enrolled in a track and considered undecided, what track are you looking at? _____

Area of interest: _____

Most current nursing position: _____

What particular subject are you interested in learning more about?

My topic of choice for case study development will probably be:

On a scale of 1-10, I'd give my interest in pathophysiology _____ .

My expectation(s) from this course is/are:

Feel free to add other information. Your ideas and concerns are very important to the success of this course.