

NURS 250 Applied Pathophysiology**Abilene Christian University****Spring 2013**

NURS 250

Wednesday: 1 to 4 pm

3 credit hours

Classroom:

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ACU Mission

To educate students for Christian service and leadership throughout the world.

School of Nursing Mission

To inspire and educate students for excellence in professional practice in preparation for Christian leadership and service as registered nurses throughout the world.

Course Description

Applied Pathophysiology introduces students to an understanding of disease physiology and clinical manifestations in adults and children with the application of the focused assessments, and patient histories needed in safe nursing practice.

“...I pray for good fortune in everything you do, and for your good health – that your everyday affairs prosper- as well as your soul!” III John 1:2

Co-requisites

BIOL 291/293

Course Purpose and Audience

Applied Pathophysiology is required for students seeking admission to the school of nursing. A final course grade of a B or higher is needed for admission, and the course may only be repeated once. This course provides the foundation for nursing assessment and the application of nursing science in safe and effective practice.

Professional Behavior Expectations

Baccalaureate educated nurses are prepared to function within an interdisciplinary team to lead and serve diverse patients (individuals, families, groups, communities, populations) across the life span in a variety of settings along the continuum of care. Since nurses' assume the responsibility of the care of others, professional attitudes, behaviors, judgments and skills must be learned and applied in all communication and interactions to provide safe and quality practice. The faculty at the SON believe that the classroom, simulation labs, and clinical experiences all provide settings for professional learning. Students are asked to engage actively in all settings as preparation for professional expectations encountered in their careers. Active engagement assumes attention to the topics, activities, speakers, faculty, peers, and patients involved in any given setting. Distractions should be for emergencies only, and faculty notified if potential phone or other issues are anticipated.

Teaching Philosophy and Christian Perspective

Faculty are responsible to facilitate the learning of students in preparation for professional careers in nursing. The faculty are responsible for modeling Christian character, authenticity, service and leadership in nursing education and practice, and want to engage students by discussion in the faculty successes and failure of this responsibility. The faculty at the SON believe that nursing curriculum should reflect the current practice environment in compliance with evidence-based professional standards and rules of regulatory organizations. The curriculum integrates the mission of the university. Concepts will reflect the knowledge, judgment, behaviors, skills, attitudes, and values required of a professional nurse. The faculty believe that active participatory student-centered learning is required in baccalaureate generalist education to develop the professional competencies required of the graduate.

Faith and learning resources as a background for this course: Proverbs 3: 5-8; Psalms 38:3; Proverbs 16:24; Jeremiah 30: 15-17; Revelation 21: 1-8. The faculty invite the students to bring further resources in the semester discussion of faith in nursing practice.

Course Content

This course provides an overview of pathophysiology by body system (cell, immune, cancer, neurologic, endocrine, hematologic, cardiovascular, lymphatic, pulmonary, renal/urologic, reproductive, gastrointestinal, musculoskeletal, and integumentary) in adults and children with an introduction to focused nursing history/observational assessment based on clinical manifestations.

Student Goals

After successful completion of this course, the student will understand and explore the application to nursing practice:

1. Basic concepts of pathophysiology

- a. The cell – biology, genetics, altered cell and tissue biology, fluid/ electrolytes, acids/bases
 - b. Mechanism of self-defense – innate/adaptive immunity, hypersensitivities, infection, immune deficiencies, stress and disease
 - c. Cellular proliferation: Cancer – biology of cancer, tumor spread, epidemiology, manifestations, treatment, cancer in children
- 2. Body systems and diseases (neurological, endocrine, hematologic, cardiovascular, lymphatic, pulmonary, renal/urologic, reproductive, digestive, musculoskeletal, integumentary)
 - a. Structure and function
 - b. Alternations in adults and children
 - c. Clinical manifestations
 - d. Focused observational assessment and patient history
- 3. Scriptural perspectives of health, illness, and healing
- 4. Professional values of caring, altruism, human dignity, civility, respect, and excellence

Texts and Online Learning Resources

Huether, S. E. & McCance, K. L. (2011). *Understanding pathophysiology*, 5th ed. St. Louis: Mosby Elsevier.

Huether, S. E. & McCance, K. L. (2011). *Online ancillaries with tools*. St. Louis: Mosby Elsevier.

Evolve. (2011). *Student resources*. Retrieved at <http://evolve.elsevier.com/Huether>

Optional:

Zerwekh, J., Claborn, J. C. & Gaglione, T. (2010). *Mosby's pathophysiology memory note cards*, 2nd. ed. St. Louis: Mosby.

Course Activities

The student will be assigned weekly readings which are reinforced by online modules, quizzes, and practice exam questions. Class preparation of reading/online modules, audio podcast s, and blog assignments will be required for active participation within the class time frame. Students will complete case studies, and choose concept maps, or other creative assignments in groups that will contribute to the final course grade. The student will summarize a health history on an adult of choice. Online module exams and unit and a comprehensive exam will assess mastery of essential information.

Course Competencies

Cognitive Competency Statements	Measurement Instruments	Performance Indicators or Criteria
The student retains basic concepts of pathophysiology, body systems and diseases.	Quizzes, exams, concept maps, case studies	Exam, quiz, and written assignment averages greater than or equal to 80/100.
The student recognizes common clinical manifestations of pathophysiology.	Quizzes, exams, concept maps, case studies	Exam, quiz, and written assignment averages greater than or equal to 80/100.
Psychomotor Competency Statements		
The student identifies important observational elements of focused assessment of patients' underlying pathophysiology.	Quizzes, exams, concept maps, case studies	Exam, quiz, and written assignment averages greater than or equal to 80/100.
The student performs a health history on an adult patient.	Health History Rubric	Score greater than or equal to 80/100
Affective Competency Statements		
The student expresses a personal view of Christian perspectives of health, illness, and healing.	Blog and class assignments	Substantive participation in 10 blogs or class assignments.
The student describes philosophies of the professional values of caring, altruism, human dignity, civility, respect, and excellence.	Blogs and in class assignments	Substantive participation in 10 blogs or class assignments.

Final Course Grading Scale

900 to 1000 points = A

800 to 899 points = B

700 to 799 points = C

600 to 699 points = D

Below 600 points = F

A final course grade of B or higher is required for admission to the School of Nursing. The course may be attempted a second time at regular course offerings for admission consideration.

Graded Course Elements

5 Unit Exams (100 points each; 50 questions each)	500 points
1 Comprehensive Exam (100 points; 100 questions)	100 points
10 quizzes (10 points each)	100 points
10 class activities (10 points each)	100 points
10 blog activities (10 points each)	100 points
Health History Paper	100 points
Total	1,000 points

Policies

Attendance and Participation

Attendance is expected and required. Absences will be excused for illness with a doctor's note, death in the family, school sanctioned trips, or other reasons approved by the faculty. See the university policy for school sanctioned absences. If a student accumulates more than 2 unexcused absences, an appointment with faculty is required for assistance to cover missed content. After the 3rd unexcused absence, the student is at risk for failure of the course. Three tardies greater than 10 minutes will count as one unexcused absence. Professional behaviors described in the previous section are expected. If a student is disrupting the atmosphere of the learning setting, the faculty may ask the student to leave the group, and make an individual appointment with the faculty to correct the issues.

Academic Integrity

Violations of academic integrity and other forms of cheating, as defined in ACU's Academic Integrity Policy, involve the intention to deceive, mislead, or misrepresent, and therefore are a form of lying, and represent actions contrary to the behavioral norms that flow from the nature of God. Violations will be addressed as described in the policy. While the university enforces the policy, the most powerful motive for integrity and truthfulness comes from one's desire to imitate God's nature in our lives. Every member of the faculty, staff, and student body is responsible for protecting the integrity of learning, scholarship, and research. The full policy is available for review at the Provost's office web site <http://www.acu.edu/campusoffices/provost> and the following offices: provost, college deans, dean of campus life, director of student judicial affairs, director of residential life education, and academic departments.

The first instance of cheating will result in a 0 for the assignment, and the student will not be allowed admission to the SON. A second incident will result in an F in the course.

Dress Code

Students are expected to conform to the dress code as outlined in the ACU Student Handbook. Students wearing inappropriate attire will be asked to leave class.

Special Needs

Abilene Christian University is dedicated to removing barriers and opening access for students with disabilities in compliance with ADA and Section 504 of the Rehabilitation Act. The Alpha Scholars Program facilitates disability accommodations in cooperation with instructors. In order to receive accommodations, you must be registered with Alpha Scholars Program, and you must complete a specific request for each class in which you need accommodations. If you have a documented disability and wish to discuss academic accommodations, please call our office directly at (325) 674-2667.

Assignments

Online Quizzes

Ten online quizzes will be given in class. Each quiz is worth 10 points.

Exams

The unit and comprehensive final exam will be given online with faculty proctors. Attendance is required at exams. The faculty must be notified before the exam if the student is not able to attend. Make-up exams are only given for excused absences (see attendance policy).

Class Activities

Students will work in groups of 3 or 4 on in class activities that will provide opportunities to prepare for course exams. Students will be assigned case studies, or will select a creative format (concept map, diagram, mnemonic, or role play) to demonstrate relationships and nursing application of content assigned for class time. The highest scores for 10 activities will contribute to the total course points. See Appendix A for rubric.

Blog Assignments

Blog assignments will be posted on the course website. Students are required to address questions substantially for at least 10 of the postings. See Appendix B for rubric.

Health History Paper

Students will make arrangements for an hour interview with an older adult. The student will then create/type a 5 page paper summarizing the health history interview. Examples of questions will be provided. This assignment allows the adult patients to discuss areas of personal importance in the health history, so the questions asked by the student may be flexible. This paper will be written in American Psychological Association (APA) format. The student will integrate 3 peer reviewed journal resources and provide reference list. A resource for format details are located at the Purdue Online Writing Lab retrieved at <http://owl.english.purdue.edu/owl/resource/560/01/> See Appendix C for grading rubric.

Assignment Content Areas

- Health status, age, developmental, socioeconomic , and cultural considerations that were included in the interview
- Biographic data (age, gender, race, ethnic identify, family living arrangements)
- Source and reliability of historian
- Current health or history of current illness
- Past health
- Family health
- Health promotion activities/needs
- Perception of health
- Activities of daily living/instrumental activities of daily living

Appendix A: In Class Assignment Rubric

Rubric Component	2 points	1 points	.5 points	0
Identifies and summarizes all components of the problems/questions at issue.	Accurately identifies the problems/questions and provides a well-developed summary.	Accurately identifies the problems/questions and provides a brief summary.	Identifies the problem/questions and provides a poor summary or identifies an inappropriate problem/question.	Does not identify or summarize the problem/question accurately if at all.
Identifies and assesses the quality of supporting data/evidence with list of references	Provides a well-developed examination of the evidence and questions its accuracy, relevance, and completeness. Clearly distinguishes between fact and opinion with list of references	Examines evidence and questions the quality. Distinguishes between fact and opinion with list of references.	Merely repeats information provided. Does not justify position or distinguish between fact and opinion.	Does not identify or assess the quality of supporting evidence.
Identifies and	Accurately	Accurately	Does not explain	Does not identify

considers the influence of the context* on the issue	identifies and provides a well-developed explanation of contextual issues with a clear sense of scope.	identifies and provides an explanation of potential contextual issues.	contextual issues; provides inaccurate information; or merely provides a list.	or consider any contextual issues.
Demonstrates higher level thinking by interpreting the manifestations of pathophysiology and observational assessments needed	Accurately identifies the manifestations and assessments needed and provides a well-developed explanation.	Accurately identifies the manifestations and assessments and provides a brief explanation.	Does not explain, provides inaccurate information, or merely lists information.	
Identifies and evaluates conclusions, implications, and consequences	Accurately identifies conclusions, implications, and consequences with a well-developed explanation. Provides an objective reflection of own assertions. Total: 10	Accurately identifies conclusions, implications, and consequences with a brief evaluative summary. Total: 5	Does not explain, provides inaccurate information, or merely provides a list of ideas; or only discusses one area. Total: 2.5	Does not identify or evaluate any conclusions, implications or consequences. Total: 0

Appendix B Rubric for Blog Assignments

Summarizes argument accurately	Misses the point; does not understand claim, reasons, and support (1 point)	Partially identifies claim, reasons, and support (2 points)	Identifies claim, reasons, and support; perhaps not maintaining questions emphasis (4 points)	Accurately identifies claim, reasons, and support without oversimplifying or distorting (5 points)
Includes essential information	Does not distinguish introductory information from argument; includes unneeded examples (1 point)	Does not distinguish introductory information from argument; perhaps includes unneeded examples (2 points)	Includes a little background or an unneeded example or two (4 points)	Excludes introductory information and unneeded examples (5 points)

Appendix C Health History Paper

Needs Improvement 10 points	Acceptable 15 points	Superior 20 points
Content Inadequate response to topic: little development of topic; quality of ideas is poor; little analysis	Reasonable response to topic: moderately sustained and developed ideas; acceptable analysis of literary works; has a balance of summary and analysis	Superior response to topic: fully sustained and developed ideas; outstanding analysis of literary works; good balance of summary and analysis
Organization/Paragraphs Thesis is absent or unclear; illogical arrangement of details; transitions absent or poor; introduction is weak or missing; conclusion is weak or missing; lack of paragraph structure.	Thesis is adequate; most ¶s have topic sentences; most ¶s have transitions and relate ideas or details to thesis; Introduction is acceptable; Conclusion generally pulls essay together; effective paragraph structure.	Thesis is clear, narrowed, focused; thesis is fully supported by body; ¶s have excellence structure; Introduction is superior; Conclusion is significant.
Style Many problems with sentence structure evidenced by incomplete, run-on or awkward sentences; tone is too casual or informal for academic writing	Reasonable style and tone; some variation in sentence length and pattern; tone is generally appropriate for academic writing	Excellent style and tone; fluent sentences with few if any structural weaknesses; good variety in sentence length and pattern; tone is completely appropriate for academic writing
Use of Sources Inadequate number or quality of sources; Problems with use of sources or formatting of sources; missed opportunities to use sources to support argument or thesis; fails to quote sources exactly; confuses quotations and	Adequate number or quality of sources; uses sources adequately to support argument or thesis; usually quotes sources accurately; usually introduces quotes;	Excellent number or quality of sources; uses sources well to support argument or thesis; always quotes sources accurately; always introduces quotes; few or no errors in parenthetical citations; few or no errors in APA format.

paraphrases; fails to introduce quotes; many errors in punctuation of parenthetical citations or quotes; many errors in APA format.	minor errors in punctuation of quotations and citations; minor errors in APA format.	
Usage Many errors in punctuation, mechanics, grammar, or spelling; errors distract reader or limit understanding of paper. <i>Major errors or excessive minor errors in format or language use generally lower the paper grade one full letter grade or more.</i>	Some errors in punctuation, mechanics, grammar, or spelling, but errors do not distract reader or limit understanding of essay. <i>Minor errors in language use or format generally lower the paper grade one-third to one-half of a letter grade.</i>	Few or no errors in punctuation, mechanics, grammar, or spelling

Rubrics adapted from:

Pierce, W. (2006). Designing rubrics for assessing higher order thinking. Retrieved from

<http://academic.pgcc.edu/~wpeirce/MCCCTR/Designingrubricsassessingthinking.html>.

Course Calendar

Date	Pre Class Preparation	In Class Assignment	Assignment Due Dates
Week 1	Course/Syllabus Orientation Huether & McCance Unit 1 Read and Audio pod cast	Describe the 8 specialized cellular functions Differentiate 4 types of tissues Explain transmission of genetic diseases Differentiate causes of cellular injury – hypoxia, free radicals, toxic chemicals, infectious agents, inflammation/immune responses, genetic factors, insufficient nutrients, or physical trauma Contrast manifestations of cellular injury	

		Online Modules 3 Proverbs 3: 5- 8	
Week 2	Huether & McCance Unit 2 Read and audio pod cast Modules 4,5,6 Blog Assignment 1	Compare Innate and adaptive immunity Illustrate pathophysiology of immune system challenge with hypersensitivity, infection, immune deficiency, and stress Explore manifestations, assessment, and history of above challenges Discussion of Blog Assignment 1 <i>Explain scriptural insights of health in Proverbs 3:5-8.</i>	Online Modules 4, 5, 6
Week 3	Huether & McCance Unit 3 Read and Audio pod cast Blog Assignment 2	Exam I Units 1, 2 – 50 questions Report cancer characteristics, terminology, genetics, spread Examine epidemiology of cancer Diagram clinical manifestations of cancer and pathophysiology of manifestations Differentiate cancer treatments and potential side effects Discuss incidence, etiology, and prognosis of childhood cancers Blog Assignment 2 <i>Why is the application of excellence of learning in Pathophysiology important for the professional development of altruism?</i>	
Date	Pre Class Preparation	In Class Assignment	Assignment Due Dates
Week 4	Huether & McCance Unit 3, 4 Blog Assignment	Continue Unit 3 Review structure and function of the neurological system Contrast types of pain and words patients use to describe	Online Module Exams 7

	3 Read and Audio pod cast	Explain the pathogenesis of fever, sleep disorders, visual acuity, types of hearing loss, somatosensory function Contrast pathophysiology ,manifestations, assessment, and histories of alternations in cognitive networks, cerebral homeostasis, and motor function Blog Assignment 3	
Week 5	Huether & McCance Unit 4 Blog Assignment 4 Read and Audio pod cast	Differentiate the pathophysiology, manifestations , assessments, and histories of central nervous system disorders, peripheral nervous system and neuromuscular junction disorders, and tumors of the CNS. Discuss alternations of neurologic functions in children Blog Assignment 4	Online Module Exam 8
Week 6	Huether & McCance Unit 5 Read and Audio pod cast	Exam 2 Units 3 & 4 – 50 questions Describe mechanisms of hormone regulation and structure and function of endocrine glands Illustrate pathophysiology ,manifestations, assessment and histories of alterations of hypothalamic-pituitary system, alternations of thyroid function, alterations in parathyroid function, dysfunction of the endocrine pancreas, and adrenal function	
Date	Pre Class Preparation	In Class Assignment	Assignment Due Dates
Week 7	Huether & McCance Unit 6 Blog Assignment 5 Read and Audio pod cast	Blog Assignment 5 Explain the components of the hematologic system, development of blood cells, and mechanisms of hemostasis Explore pathophysiology ,manifestations, assessments, history of alterations of erythrocyte function, leukocyte, platelets, and coagulation in adults Distinguish manifestations of hematological disorders in children	Online Module Exam 9, 10
Week	Huether &	Blog Assignment 6	Online

8	McCance Unit 7 Blog Assignment 6 Read and Audio pod cast	Review the circulatory system, cardiac flow, systemic circulation, and lymphatic system Illustrate the pathophysiology of diseases of arteries/veins, heart wall, and shock Differentiate the manifestations , assessments, and history of heart disease Discuss congenital and acquired cardiovascular diseases in children	Module 11
Week 9	Huether & McCance Unit 8 Read and Audio pod cast	Exam 3 Units 5,6,7 50 questions Review structure and function of the pulmonary system Compare pathophysiology, clinical manifestations, assessments, histories of pulmonary diseases Discuss pulmonary disorders in children including Sudden Infant Death Syndrome (SIDS)	
Week 10	Huether & McCance Unit 9 Blog Assignment 7 Read and Audio pod cast	Blog Assignment 7 Review structure, function, blood flow of the renal system Contrast pathophysiology, manifestations, assessments, histories of urinary tract obstruction, infection, glomerular disorders, and renal failure Compare structural abnormalities, glomerular disorders, obstructive disorders, nephroblastoma, and enuresis in children	Online Module 12, 13
Date	Pre Class Preparation	In Class Assignment	Assignment Due Dates
Week 11	Huether & McCance Unit 10 Blog Assignment 8 Read and Audio pod cast	Blog Assignment 8 Review the development of the male and female reproductive systems Explain pathophysiology, manifestations, assessments, histories of alternations in sexual maturation, female and male reproductive systems, disorders of the breast, and sexually transmitted diseases	Online Module 14

Week 12	Complete Health History	Exam 4 Units 8,9,10 – 50 questions After exam, students may leave to provide time for history interviews.	
Week 13	Huether & McCance Unit 11 Blog Assignment 9 Read and Audio pod cast	Blog Assignment 9 Review the structure and function of the gastrointestinal tract, and the accessory organs of digestion Discuss the pathophysiology, manifestations, assessments, and histories of disorders of the gastrointestinal tract, accessory organs of digestion, and cancers of the digestive system Explain disorders of the gastrointestinal tract and liver in children	Online Module 15 Exam Health History Due
Week 14	Huether & McCance Unit 12 Blog Assignment 10 Read and Audio pod cast	Blog Assignment 10 Review structure and function of bones, joints, muscles, and skin Compare etiology/pathophysiology, manifestations, assessments and histories of musculoskeletal injuries, disorders of bones, joints, muscles, musculoskeletal tumors, and integumentary diseases Describe musculoskeletal and integumentary alternations in children	Online Module 16 Exam
Week 15		Exam 5 Units 11 & 12 – 50 questions	
Week 16		Comprehensive Final – 100 questions	

