

SUL ROSS STATE UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
BIO 2320 Pathophysiology

INSTRUCTOR: Dr. Geraldine M. Goosen

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On-line Office Hours: Thursday 3 pm to 7 pm or by appointment.

Meeting Room: First Meeting in BB Meeting Room on Thursday, January 15, 2020 @

CLASS WEBSITE: [HTTP://SULROSS.BLACKBOARD.COM](http://sulross.blackboard.com)

COURSE DESCRIPTION:

This course builds on knowledge obtained in anatomy and physiology courses which provides information related to basic pathological processes that underlie diseases commonly found in clinical practice. The basics of each pathological process are explained and illustrated by exploration of common diseases caused by that pathological process. Introduction of selected pathophysiologic concepts across the life span will be initiated in this course with emphasis on diagnostic data related to the concept.

COURSE LEARNING OBJECTIVES:

Upon completion of assignments in this course, the student will:

1. Demonstrate understanding of pathological processes and how these changes produce disease.
2. Differentiate the following types/categories of disease/pathology that provide the basis for planning and implementing health care including:
 - A. Inherited or Familial Diseases
 - B. Congenital Diseases
 - C. Toxic Diseases
 - D. Inflammation
 - E. Infectious Diseases
 - F. Traumatic Diseases
 - G. Degenerative Diseases
 - H. Allergic Diseases
 - I. Auto-immune Diseases
 - J. Neoplastic Diseases

- K. Nutritional Diseases
 - L. Metabolic Diseases
 - M. Molecular Diseases
 - N. Psychosomatic Diseases
 - O. Factitious Disease
 - P. Iatrogenic Disease
3. Relate disease clinical referents/signs and symptoms to laboratory findings and to their underlying pathology.
 4. Use knowledge of genetic inheritance, environment, lifestyle choices and other identified antecedents/risk factors that contribute to disease development.
 5. Recognize the presence and effects of compensatory mechanisms in response to major pathological alterations.
 6. Apply knowledge of variables affecting the healing process in tissues and organ systems to management of common diseases and injuries.
 7. Describe best safety practices to assure accuracy of obtaining diagnostic data required to identify the disease process and the magnitude/extent of the disease.
 8. Differentiate between life span changes that occur with selected pathophysiologic concepts.

MARKETABLE SKILLS FOR THE DEPARTMENT OF NURSING

The following marketable skills and dissemination plan has been submitted to the Texas Higher Education Board after approval from Assistant Vice President for Institutional Effectiveness at Sul Ross State University:

Students will:

1. develop inquiry skills to evaluate situations (Sense of Inquiry);
2. develop communication skills to evaluate situations (Communication Skills);
3. develop research skills to promote their lifelong learning (Continuous Lifelong Learning); and
4. comport themselves verbally and visually in a professional manner (professionalism).

Plan for Dissemination:

Students learn the marketable skills by first being exposed to them in all course syllabi. Each of the marketable skills is closely observed and evaluated by clinical faculty and preceptors as students progress through the educational program. Students hone their research and communication skills through assignments and activities in multiple classes.

REQUIRED TEXTBOOKS:

Grossman, Sheila, C., and Porth, Carol Mattson. *Porth's Pathophysiology*. Philadelphia: Wolters Kluwer, 9th Edition, 2014.

Pagana, Kathleen, Pagana, D, and Pagana, Theresa, *Mosby's Diagnostic and Laboratory Test Reference*. Thirteenth Edition, 2017 St. Louis: Mosby/Elsevier.

RECOMMENDED RESOURCES:

Center for Disease Control Website: <http://www.cdc.gov/>

American Diabetes Association website: <http://www.diabetes.org/>

Medscape: <http://www.medscape.com>

National Institutes of Health website: <http://www.nlm.nih.gov>

National Stroke Association website: <http://www.stroke.org/>

STUDENT REQUIREMENTS:

Students in this course are expected to complete weekly assignments with current and relevant data. Weekly assignments and resources will be placed in a weekly folder, starting with the unit objectives. Students are expected to read textbook assignments and utilize other resources in your weekly folder to acquire information that will assist the learning process. Power-points provided in the weekly folder will assist each student to focus on important information which can be used to enhance learning. The first step in learning the content you to pass this course is to read the assignments designated in the Class Schedule/Weekly Folder. The second step is to attend the first on-line discussion in the Blackboard Meeting Room. This first meeting time is scheduled for Wednesday, January 15th from 6:00 to 8:00 pm. The subsequent semester meeting dates and times will be planned at that first meeting. At this time, Wednesday and Friday are open days to hold the required weekly meetings.

Each student will demonstrate learning behavior, application of knowledge in case studies and class discussion, interpersonal skills, teamwork skills, appropriate writing skills and professional communication when completing course requirements. Group assignments will be arranged. Each student is responsible for meeting with other students in the group to complete the activities designated. These meetings can be held in the BB Meeting Room. If a member of the group fails to comply with expected group activities, it is the responsibility of the group to discuss lack of participation with the faculty of record.

COURSE ASSIGNMENTS:

Weekly Folders:

Weekly folders are posted in blackboard which provide unit objectives to guide the learning activities. These objectives are also used as a focus for questions included on scheduled examinations. Resources including power-points from your textbook and other sources will be placed in each folder. Selected concepts with information across the life span will assist your focus on certain pathophysiologic issues that underlie a group of diagnoses. Pre-tests linked to the concepts will be provided for you to complete before class time. Five case studies are provided for you to complete prior to class which will be discussed during the meeting room activities. Due dates for learning activities are posted on the class schedule with reminders available in the folders.

Unit Definitions:

Weekly assignments include written definitions to key terms that are listed in the unit objectives. Select a minimum of ten terms from those that are listed, especially those terms that are unfamiliar to you. During the semester, you will need to submit a minimum of 10 sets of terms from the Units listed in this syllabus. Post the definitions in Blackboard Assignments. It will be helpful to begin your weekly assignments by first defining those terms which are new before reading the assigned material in your textbook.

Case Studies:

Five case studies are assigned in the Class Schedule that you will need to complete. Questions related to the case studies will be placed in the appropriate weekly folder. Each student will answer the questions as directed and the case study answers will be discussed in the Meeting Room. The major focus for each case will relate to anatomical and physiological changes which occur during the disease process as well as diagnostic data that reflect the condition identified in the case study. Questions must be completed before class time on the date they are due. They will be discussed in the Meeting Room Discussion so you understand the rationale for answers.

Pre-test for Concepts:

Several pathophysiologic concepts have been provided for you to study that address a selected concept which is common in a group of diagnoses. The concept addresses information across the life span so you have an opportunity to see changes that occur from infancy to aging, especially as they relate to diagnostic laboratory data. A pre-test is provided with the concept analysis. You are required to answer the questions on the pre-test according to guidelines provided by the faculty of record. Grades from the pre-test will be included in Weekly Assignments.

Concept Analysis:

Your major written assignment for this course is a professional paper related to a concept analysis for your selected pathophysiologic concept. After you select at least one student to be

your partner for this assignment, (a maximum of three students can be in one group), a decision must be made about the selection of the topic you wish to analyze. The guidelines and form used to develop and present this information are provided the weekly folder. Since this is your first experience with concepts, you are being asked to select one age group on the form to research and present pertinent information in that category. That can be infant (birth to 1 year of age); early childhood (1 year to 6 years of age); late childhood (6 years to puberty); adolescence; adult; and or the geriatric patient. Orientation to the Library will be extremely helpful to you since you are required to present the information using APA format. The paper must be a minimum of 10 pages. Please select a concept from the terms listed below. If you have a term/concept you wish to study, please notify the faculty of record for approval of your concept.

Acidosis

Alkalosis

Anemia

Asthma

Dehydration

Dyspnea

Hematoma

Ischemia

Hypoglycemia

Examinations:

Examinations are listed in the class schedule. You will be taking the examinations on Black Board as scheduled. The first examination you will have a longer allotment of time to complete the exam since it will be helpful to carefully review the types of questions included. Most of the examinations will be 100 points which can be derived from true and false questions, multiple choice questions and multiple response questions. The assigned points for each group will be specified on the test. You may also be asked to identify components of an anatomical structure. Reviewing the unit objectives should be the first step before you begin reading the chapters. In addition to the chapters, questions will be derived from the concept analysis, pre-test for the concepts, and power points.

All examinations will have a time limit identified which will vary, based on the extent of content related to the topics. You must know how much time is allotted before you begin taking the examination. If you are **unable to take the examination** at the specified time, the faculty of record must be notified before the scheduled test time.

Please be alert to the factor that the class schedule does not follow the sequence of Units listed in the book. It will help you to have some key information earlier in the class. Therefore, be careful regarding your preparation for class and examination preparation. The schedule will remain as it is unless otherwise announced to you. Also, you will see in the schedule that the examination will be given during the same week that class discussion is held. This allows you to focus entirely on one set of data included in a unit, take the examination, and move on to the next topic.

CLASS SCHEDULE:

Week One: January 13, 2020

Review Syllabus

Orientation to Library Web Site:

Place a Biography in Black Board for your peers and faculty

Unit I Concepts of Health & Disease (Chapters 1, 2 & 3)

Select the 10 vocabulary words to define

Define terms listed in Course Objective number 2 on the first page of the syllabus and post in BB assignments. Bring a copy of your definitions to class for discussion.

Week Two: January 20, 2020

Unit II Cell Function and Growth (Chapters 4 & 5)

Examination over Units I and II

Week Three: January 27, 2020

Unit III Disorders of Integrative Function (Chapters 10, 12 & 13)

Complete Pre-test for Fever (Obtain answers from Concept Analysis of Fever)

Submit Pre-test in Assignments

Week Four: February 3, 2020

Unit III Disorders of Integrative Function (Chapters 14, 15 & 16)

Examination over Unit III (Chapters 10, 12, 13, 14, 15, & 16)

Week Five: February 10, 2020

Unit IV Disorders of the Hematopoietic System (Chapters 25, 26, 27 & 28)

Examination over Unit IV

Week Six: February 17, 2020

Unit V Disorders of Cardiovascular Function (Chapters 29, 30, & 31)

Case Study #1

Week Seven: February 24, 2020

Unit V Disorders of Cardiovascular Function (Chapters 32, 33 & 34)

Examination over Unit V

Week Eight: March 2, 2020

Unit VI Disorders of Endocrine Function (Chapters 48, 49 & 50)

Pre-test for Hyperglycemia (Obtain answers from Concept Analysis of Hyperglycemia)

Examination over Unit VI

Week Nine: March 9 to 14, 2020 SPRING BREAK

Week Ten: March 16, 2020

Unit VII Disorders of Respiratory Function (Chapters 35, 36 & 37)

Examination over Unit VII

Case Study #2

Week Eleven: March 23, 2020

Unit VIII Fluids, Electrolytes and Acid-Base Dysfunction (Chapters 38, 39 & 40)

Case Study #3

Week Ten: March 30, 2020

Unit VIII Disorders of Renal Function (Chapters 41, 42 & 43))

Examination over Unit III

Week Eleven: April 6, 2020

Unit IX Disorders of Gastrointestinal Function (Chapters 44, 45, 46 & 47)

Examination over Unit IX

Case Study #4

Week Twelve: April 13, 2020

Unit X Disorders of Neural Function (Chapters 17, 18 & 19)

Complete Pre-test for Nociceptive Pain (Obtain answers from Concept Analysis of Nociceptive Pain)

Week Thirteen: April 20, 2020

Unit X Disorders of Neural Function (Chapters 20, 21 & 22)

Examination over Unit X

Case Study \$5

Week Fourteen: April 27, 2020

Unit XI Disorders of Genitourinary & Reproductive Function (Chapters 52, 54 & 55)

See Guide for Final Examination on Announcements

Week Fifteen May 4, 2020

Week Sixteen May 11 Final Examination Week

The above schedule is a brief description of the week's activity. A folder for each week which contains unit objectives, assignments and resources. These folders will be available in BB.

GRADING POLICY FOR COURSE:

Assignments outlined in this course will include examinations, written definitions, concept analysis pre-test, and case studies. The major written assignment will be development of an Across the Life-Span Pathophysiologic Concept Analysis. Grading percentages will occur according to the following:

Unit & Final Examinations 40%

Written definitions, Concept

Analysis Pre-test, & Case

Studies 30%

Development of Across the Life

Span Pathophysiologic Concept

| | |
|----------|------|
| Analysis | 30% |
| Total | 100% |

STUDENT/FACULTY EXPECTATIONS IN THE TEACHING/LEARNING PROCESS:

Learning is a shared endeavor based upon respectful and collaborative relationships between students and faculty. The learning activities designed for this course were developed based upon the following:

- 1) As adult learners we are partners in learning.
- 2) Faculty members serve as a mentor, resource, guide, or coach and professional peer.
- 3) Our work and life experiences differ and serve to enrich our individual and mutual learning.
- 4) Each member of the class is committed to preparing for and successfully completing class learning activities.
- 5) Each member of the class will organize time, learning goals, work schedules, and family arrangements to fully participate in the course and assignment activities.
- 6) Each member of the class is able to use computer technology and access resources via the Internet and other mobile technologies as needed for this and other courses.

COMMUNICATIONS:

- **Announcements** – Check announcements each time you log onto the course.
- **Course email** – Check course email frequently for communications and make sure that your email address is current. Faculty will respond to inquiries and comments within 24 hours Monday-Friday.
- **Use of technology:** If you have any technical questions, problems, or concerns with Blackboard, do not spend more than 15 minutes on any technical problems. Seek help immediately. Contact 24-7 Help Desk at: 1-888-837-2882 and/or techassist@sulross.edu.
- **Responses to emails and course postings:** Please respond to faculty requests and/or communications within 24 hours. Use course or Sul Ross email and, if not available, mobile phone or texting between the hours of 9 AM and 6 PM if possible. Messages received on the weekends or holidays will be answered by the next working day.
- **Assignments:** Assignments will be reviewed and returned with feedback/grade within 4 days of submission.
- **Writing and use of APA:** All written assignments and bulletin board postings will be submitted using the American Psychological Association (APA) Guidelines, as indicated by faculty. <http://owl.english.purdue.edu/owl/resource/560/01>

ATTENDANCE AND PARTICIPATION:

- Your attendance is expected at every class meeting, both face to face and online.
- Readings and learning activities relevant to the weekly topic are identified in the course schedule and weekly folders.
- Scholarly and knowledgeable participation requires that you read your assigned readings prior to joining the class discussions.
- An online course requires participation in all areas for accurate evaluation of performance, including responding to faculty requests or communications.
- If you have an emergency and cannot attend a class meeting or complete an assignment by the due date, you must contact your faculty by phone, email, or text as soon as possible and make arrangements to make up the assignments.
- Blackboard course platforms have a tracking feature. This feature quantifies how often and when students are active in the course and also provides information if the student has accessed different pages of the course. The Blackboard tracking function may be utilized to verify student online participation.

RULES OF NETIQUETTE:

The term “netiquette” refers to written and unwritten rules regarding appropriate communication on the Internet. It applies primarily to interactions on the course Discussion Board, individual and group assignments, and e-mail communications.

1. Help create a community of scholars by encouraging a cooperative win-win attitude in which all members of the class are willing to work together, each contributing in their own way.
2. Be courteous and respectful to students and faculty in the course.
 - a. There is a difference between making a statement that is a critical appraisal of an idea and criticizing someone for their point of view.
 - b. Be careful with the tone of what you are communicating, as with sarcasm and subtle humor; one person’s joke may be another person’s insult.
 - c. Do not use all caps in the message box (it is considered shouting).
 - d. Do not use language that is inappropriate for a classroom setting or prejudicial in regard to gender, race or ethnicity.
3. Be helpful and be sure to do your part in an online class or in group work so that assignments can be completed according to the course schedule.
4. Common courtesies and good manners, along with the use of proper grammar, sentence structure, and correct spelling, are essential when taking an online course.
 - a. Use meaningful titles in the Subject line. For e-mail, include the course number.
 - b. Use the person’s name you are addressing as a greeting in the first line of the message. This helps ensure that you are writing to the intended person (group).
 - c. Close the posting by writing your full name at the end of the message.
5. Discussion Boards are public, and the University archives all materials. Do not post anything too personal, as all students in the class and your instructor will see what you write.
 - a. Keep the messages you post to the Discussion Board relevant to the course and assignment and provide a rationale, including references as appropriate, to support your point of view.

- b. Avoid duplication. Read the previous discussions before you comment or ask a question, as the information may have already been covered.
 - c. When posting a response, make sure that you identify the post to which you are responding.
 - d. If the topic you plan to address is already covered under an existing thread, do not start a new thread.
 - e. When responding to a specific comment, quote only the relevant part of the comment and stay focused on the assignment.
 - f. Try not to lurk, meaning you are just reading and not participating.
6. Quality of online communications/postings is important.
- a. It is not acceptable to present work or ideas of others as your own. Use APA format when you quote directly from a source; use quotation marks and provide the original author's name, year, and page or location in the body of the narrative. When you paraphrase a source—using your own words to explain your understanding of another's ideas or work—provide author and year in the body of the narrative. At the end of the posting provide the complete reference using APA format.
 - b. If the posting is going to be long, use paragraphs.
 - c. Do not overuse acronyms and abbreviations like you use in text messaging. Some participants may not be familiar with acronyms and abbreviations.
 - d. Just as you would proofread a formal paper, before posting
 - i. Read what you have written for content;
 - ii. Rethink what you have written for tone;
 - iii. Reread what you have written for organization and coherence; and
 - iv. Revise what you have written for grammar, punctuation and mechanics.
 - v. Once you submit your work, discussion, or e-mail, you cannot change what you have written.
7. Do not send large files, since someone in your class may have a relatively slow internet connection or limited server capacity.
8. Be sure to use a reliable computer security system with functioning anti-virus software. Check for viruses when sending and sharing files.
9. Be patient if you do not get an immediate response to your postings, as others may be on a different schedule. If it is urgent, contact other students or faculty by e-mail, phone, or text.

MANDATORY UNIVERSITY STATEMENTS:

Academic Honesty Policy: The University expects all students to engage in all academic pursuits in a manner that is beyond reproach and to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. The University may initiate disciplinary proceedings against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. Academic Dishonesty includes:

1. Copying from another student's test paper, laboratory report, other report, or computer files, data listings, and/or programs, or allowing another student to copy from same.
2. Using, during a test, materials not authorized by the person giving the test.
3. Collaborating, without authorization, with another person during an examination or in preparing academic work.

4. Knowingly, and without authorization, using, buying, selling, stealing, transporting, soliciting, copying, or possessing, in whole or in part, the contents of a non-administered test.
5. Substituting for another student; permitting any other person, or otherwise assisting any other person to substitute for oneself or for another student in the taking of an examination or test or the preparation of academic work to be submitted for academic credit.
6. Bribing another person to obtain a non-administered test or information about a non-administered test.
7. Purchasing or otherwise acquiring and submitting as one's own work any research paper or other writing assignment prepared by an individual or firm. This section does not apply to the typing of a rough and/or final version of an assignment by a professional typist.
8. "Plagiarism" means the appropriation and the unacknowledged incorporation of another's work or idea in one's own written work offered for credit.
9. "Collusion" means the unauthorized collaboration with another person in preparing written work offered for credit.
10. "Abuse of resource materials" means the mutilation, destruction, concealment, theft or alteration of materials provided to assist students in the mastery of course materials.
11. "Academic work" means the preparation of an essay, dissertation, thesis, report, problem, assignment, or other project that the student submits as a course requirement or for a grade.

All academic dishonesty cases may be first considered and reviewed by the faculty member. If the faculty member believes that an academic penalty is necessary, he/she may assign a penalty, but must notify the student of his/her right to appeal to the Department Chair, the Associate Provost/Dean, and eventually to the Provost and Vice President for Academic Affairs before imposition of the penalty. At each step in the process, the student shall be entitled to written notice of the offense and/or the administrative decision, an opportunity to respond, and an impartial disposition as to the merits of his/her case.

In the case of flagrant or repeated violations, the Vice President for Academic Affairs may refer the matter to the Dean of Students for further disciplinary action. No disciplinary action shall become effective against the student until the student has received procedural due process except as provided under Interim Disciplinary Action.

AMERICANS WITH DISABILITIES ACT (ADA) STATEMENT:

Sul Ross State University is committed to compliance with the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973. Qualified students with disabilities needing academic or other accommodations to facilitate full participation in our programs, services and activities should contact the Accessibilities Coordinator, Ferguson Hall Room 112, Monday – Friday 8:00 a.m. – 5:00 p.m., 432-837-8203 at the Alpine campus. At the Uvalde Campus, Room C102, Monday – Friday 8:00 a.m.-5:00 p.m.

ONLINE COURSES:

Web courses (offered online) are not self-paced and require considerable work in order to meet requirements. Students should be prepared to devote approximately 12 hours per week to accomplish the work required for a 3-hour class (i.e. student should devote approximately the same study time for an online course as would be spent in a regular class with outside work requirements—a measure generally calculated at 3 hours outside work for each hour in class.) Students **MUST** have a reliable high-speed internet connection available on a regular basis for course work and other assignments whenever University computer laboratories are not open. Computer labs are open Mon.-Thurs., 8 a.m.-10 p.m., and Fri. 8 a.m.-5 p.m. University computer labs are not open on weekends and holidays.

DISTANCE EDUCATION STATEMENT:

Students enrolled in distance-education courses have equal access to the university's academic support services, such as Smarthinking, library resources, such as online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance-education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website.

GENERAL CAMPUS REGULATIONS AND CONDUCT:

All students are expected to conduct themselves in a manner consistent with the University's functions as an educational institution. It is also expected that all students who enroll at Sul Ross State University agree to assume the responsibilities of citizenship in the university community. Association in such a university community is purely voluntary, and any student may resign from it at any time when he/she considers the obligation of membership disproportionate to the benefits. All students are subject to University authority, and those students whose conduct is not within the policies of the University rules and regulations are

subject to dismissal. Students are responsible for abiding by all published University rules and regulations. Failure to read publications will not excuse the student from the requirements and regulations described therein. The SRSU Student Handbook and other official University publications outline specific regulations and requirements.

