BIOMED 3100

**Pathophysiology**

**COURSE PROFILE**

Course Description Pathophysiology is the study of changes in the body resulting from disease. This course requires knowledge of normal anatomy and physiology in animals, which will provide a foundation for the study of abnormal function. While intended primarily for veterinary technicians, a comparative approach involving both human and domestic animal models makes the course useful for students in nursing and allied health professions.

Instructor Craig Datz, DVM, MS, DABVP, DACVN

Adjunct faculty

College of Veterinary Medicine

Phone: 573-999-3475

Email: datzc@missouri.edu

Major Objectives After completion of the course, you will be able to:

1. Explain the role of pathophysiology in the diagnosis and treatment of disease

2. Differentiate between normal and diseased states of body systems

3. Outline the causes, progressions, and responses to pathologic changes associated with common diseases

Prerequisites 1. AAS or equivalent degree in veterinary technology from an American Veterinary Medical Association-accredited program or instructor permission

2. College-level (undergraduate) course (minimum 3 credit hours) in anatomy and physiology of humans and/or domestic animals

Delivery This course is delivered completely online. You are not required to attend class at regular times; however, it is important that you follow the attendance/participation guidelines and meet due dates and deadlines for readings, assignments, discussions, quizzes, and exams. Communications will be through the discussion board, announcements, and email. Real time video conferencing is possible on request.

Course delivery strategies may include: reading from required textbook(s), reading resources linked to the Internet, use of the discussion board, use of the Internet, and e-mail.

Organization Course materials are located in Blackboard under Course Units. Sessions are found under Units and Modules are under Sessions. Further instructions for finding and using course materials are provided in Blackboard.

Required Materials Gould, Barbara E and Dyer, Ruthanna. Pathophysiology for the health professions (4th edition). Philadelphia: Saunders Elsevier, 2010.

**EVALUATION OF**

**STUDENT**

**PERFORMANCE**

Satisfactory

Performance There will be 1000 possible points in the course. A portion of the possible points will be achieved each week. More than 600 points are required for a passing grade. Two proctored exams will provide a total of 600 points. The remaining 400 points will be based on weekly quiz scores, professionalism (attendance, meeting deadlines), and contributing to the discussion board. The instructor reserves the authority to adjust final grades if no student achieves 100% of possible points in the course. Students with less than 61% at mid-term will receive a warning. Grades will be available in Blackboard. To insure confidentiality, they will not be sent by email.

Students must log on to the course at least twice each week to receive professionalism points. Students who perform well typically log on 3 or more times per week. Points are earned on the discussion board by logging on, answering questions posed by the instructor, helping answer questions from other students, asking questions, and contributing to ongoing discussions.

Exams and Quizzes Exams are available only under the supervision of a proctor. Contact Mizzou Online to locate a local proctor for your exams. One hour (60 minutes) will be allowed for exams.

This course uses weekly online quizzes to assess your comprehension of the assigned readings. These quizzes will be available in the Quizzes area of Blackboard every Monday at 8 am until Sunday at 11:59 PM (after midnight, quiz will not be available). Quizzes are timed and you will have 15 minutes to complete 5 multiple-choice questions (the timer, a yellow box, will be located in the upper right of your screen). You may take the quiz only once. The following are key considerations to successfully completing a quiz:

* Complete all assigned readings prior to accessing the online quiz.
* Force completion is turned ON: you must complete the quiz once you start it – you may not come back to the quiz later. If you are disconnected, send email to your instructor immediately. After contacting your instructor, please send an email to [blackboard@missouri.edu](mailto:blackboard@missouri.edu), with your name, username, course name, the title of the quiz or assignment, and a description of the problem.
* To ensure Blackboard logs every answer, click the Save button at the bottom of the page after each question. You must click Submit in order to have your quiz graded.
* You must enable Compatibility View with Internet Explorer 8. A complete list of supported browsers is available [online](https://courses.missouri.edu/students/blackboard/software.php#softwareneeded).

Grading The grading scale will be A to F, including some pluses and minuses but no A+, C+, C-, D+, or D-. Grades will be based on the following scale:

96-100% = A

91-95% = A-

88-90% = B+

84-87% = B

81-83% = B-

71-80% = C

61-70% = D

60% or less = F

Note: A Certificate in Biomedical Technology requires at least a C grade in this course, plus a total of 15 credit hours BIOMED courses with an average GPA in all BIOMED courses of 3.0.

**COURSE**

**SCHEDULE**

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| --- | --- | --- | --- |
|  | Unit/Session | Reading Assignments | Other Assignments |
|  | 1: Introduction  1: Terminology, cells  2: Fluids, electrolytes | 2, 5-8, 8-12  118-125, 125-132, 133-139 | Quiz |
|  | 2: Inflammation and cancer  3: Inflammation, immunity  4: Hypersensitivity, neoplasia | 16-23, 26-29, 40-47  48-58, 96-106, 107-112 | Quiz |
|  | 3: Stress and pain  5: Stress    6: Pain | 193-195, 196-198  200-203, 204-206, 208-210 | Quiz |
|  | 4: Neurologic and musculoskeletal systems  7: Nervous system  8: Musculoskeletal system    PROCTORED EXAM #1 | 466-470, 470-477  574-578, 579-583 | Quiz  Midterm exam |
|  | 5: Gastrointestinal and hepatic systems  9: Digestive system    10: Liver and pancreas | 378-385, 385-389  406-408, 413-417, 418-419 | Quiz |
|  | 6: Skin and sensory organs  11: Dermatology    12: Special senses | 596-600, 600-604  530-531, 533-537, 538-542 | Quiz |
|  | 7: Heart, lungs, vascular systems  13: Cardiovascular system    14: Respiratory and blood systems | 272-273, 275-281, 293-300, 324-332  332-334, 360-367, 244-249, 251-256, 260-261 | Quiz |
|  | 8: Reproductive and genitourinary systems  15: Male and female reproduction,    16: Urinary system    PROCTORED EXAM #2 | 614-615, 620-622, 615-618  440-447, 452-454, 458-462, 448-451, 454-456 | Quiz  Final exam |