

**CONTACT INFORMATION**

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**Clinical Pathology Laboratory**  
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**COURSE MATERIALS**

**Recommended texts/sources**

Steven L. Stockham & Michael A. Scott, Fundamentals of Veterinary Clinical Pathology, Ed. 2, Wiley-Blackwell, ISBN-13: 978-0813800769  
 John W. Harvey, Veterinary Hematology: A Diagnostic Guide and Color Atlas, Ed. 1, Saunders, ISBN-13:978-1437701739. [LSU Digital Access](#)  
 Rose E. Raskin & Denny J. Meyer, Canine and Feline Cytology: A Color Atlas and Interpretation Guide, Ed. 2, Saunders, ISBN-13:978-1416049852 [LSU Digital Access](#)  
 Raquel M Walton, Equine Clinical Pathology, Ed. 1, Wiley-Blackwell, ISBN: 978-0-8138-1719-4. [LSU Digital Access](#)  
 Cornell University College of Veterinary Medicine Clinical Pathology Website: [www.eclinpath.com](http://www.eclinpath.com)

**COURSE DESCRIPTION**

Students on this rotation evaluate current and archived clinical pathology data (including complete blood count, serum biochemistry, urinalysis, coagulation times, and cytology) alongside the clinical pathologist and resident on clinical duty. The clinical pathology service provides first-hand experience of diagnostic evaluation of clinical pathology data for common and complex diseases of small, large, and exotic animals. Students are taught directly by the pathologist on duty at all times.

**COURSE OBJECTIVES**

<b>List course/clerkship learning objectives:</b>	<b>List keywords for each objective</b>
1. Describe and interpret erythrocyte data from a complete blood count.	CBC, blood, erythrocyte
2. Describe and interpret leukocyte data from a complete blood count.	CBC, blood, leukocyte
3. Evaluate serum biochemistry data using appropriate terminology.	Chemistry, blood
4. Understand common causes of factitious complete blood count and serum biochemistry results.	CBC, chemistry, methods, interpretation
5. Evaluate and interpret urinalysis results.	Urine, urinalysis, renal
6. Relate laboratory data to appropriate prognosis and/or treatment.	Diagnosis, treatment, prognosis
7. Know the proper sample collection and preparation procedures for routine cytology.	Diagnostics, methods, sampling
8. Describe and interpret common cytologic presentations (round cell vs. epithelial vs. mesenchymal tumors, criteria of malignancy, inflammatory conditions).	Cytology, neoplasia, aspirate, inflammation

**TEACHING PHILOSOPHY**

Participate in a socratic environment for refining your skills in interpreting important diagnostic methodologies. With constant direct contact with the clinical pathologists, learn through repetition of interpreting various data sets and cytologic specimens.

Correlate current clinical cases with the diagnostic data generated for those patients to reinforce concepts related to disease processes and treatment modalities, and how those diseases and treatments affect diagnostics.

## COURSE POLICIES

### Orientation

Students will meet in the clinical pathology laboratory (VCS 1812) on the first day of the block at 9 am. Schedule and course policies will be reviewed at this time. In general, we will meet at 9 am in the clinical pathology laboratory. We tend to receive fewer cytology submissions in the mornings, so we usually fill this time with chemistry/hematology case discussions, review of projected images, or review of classic cytology/hematology slides. You will review the daily cytology submissions with the pathologist on duty during the afternoon.

You are required to attend several recurring rounds sessions as part of the rotation: Diagnostic Pathology Conferences in the LADDL teaching room (LADDL 1084) on Wednesdays at 8:30 am, clinical pathology rounds with the small animal medicine students on Fridays at 8 am, student oncocytology rounds on the second Wednesday of the rotation at 1 pm in the multiheaded microscope room (LADDL 2028), and gross pathology rounds on Thursdays at 1:10 pm in necropsy.

### Equipment

Professional attire is not absolutely required for this rotation; however, open-toed shoes are not permitted in the laboratory, and labcoats must be worn into necropsy for gross pathology rounds.

### Attendance/Lateness Policy

All absences other than sudden illness must be pre-approved by Drs. Grasperge or Dehghanpir. Unexcused absences and tardiness will result in an incomplete grade.

## COPY STATEMENT

Some of the materials in this course are possibly copyrighted. They are intended for use only by students registered and enrolled in this course and only for instructional activities associated with and for the duration of the course. They may not be retained in another medium or disseminated further. They are provided in compliance with the provisions of the Teach Act (Section 110(1) of the Copyright Act) <http://www.copyright.gov/docs/regstat031301.html>.

## GRADING/EVALUATION

Grades are generally subjective, based mainly on your class participation, attitude, end of rotation presentation, and improvement in clinical pathology skills/knowledge over the two week course. Points may additionally be awarded by any combination of exams, laboratory exercises, or unannounced quizzes at the discretion of the individual instructors.

During case and slide reviews with the pathologist on duty, you are expected to take active roles in answering/asking questions as well as participating in the discussions in general. If chemistry cases are handed out a day or two in advance of discussion, preparation outside of class will be expected.

The grading scale used in this course is in accordance with the School of Veterinary Medicine suggested guidelines as follows:

<b>GRADE</b>	<b>Grading Scale</b>
A+	97-100
A	93-96
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	63-66
D-	60-62
F	<60

Please review the statements supplied to you by the Dean of Students. The "D-rule" is in effect for D+, D and D-, while the C is the 2.0 needed for your loan (not a C-).

## ASSIGNMENTS/RESPONSIBILITIES

Clinical pathology Jeopardy will be held the first Thursday of your rotation at 9 am. You are responsible for creating question for two categories (5 questions each, \$100-\$500 value). The topics to choose from are RBCs, WBCs, Renal/UA, Effusions, Coag/Platelets, Paraneoplastic, Acid-Base/Electrolytes, Hepatic, and Endocrine. Make sure everyone on your rotation has different topics.

You are required to prepare a 15-20 minute presentation for the last Friday of your clinical pathology elective rotation, to be given after the 8 am medicine/clin path rounds. The topic is your choice, but must be clinical pathology-based and must be approved by Drs. Grasperge or Dehghanpir by Monday of your last week on the rotation.

## COURSE CONTENT AND OUTLINE

This rotation consists primarily of review of hematologic, serum chemistry, and cytologic samples submitted from the VTH&C during the standard working hours. Common topics covered during this time include:

CBC/chemistry		Cytology
Various causes of anemia	Factitious results	Inflammatory/infectious
Endocrine diseases	Inflammatory disease	Benign tumors
Renal disease	Coagulopathies	Carcinomas
Hepatic disease	Methodologies	Sarcomas
Toxic insults	Acid-Base/Electrolyte disturbances	Round cell tumors

## PHOTOGRAPHS AND VIDEO OF PATIENTS

Photographs and video may be taken of patients for educational purposes (e.g., for use in abstracts, articles, and presentations). Any photographs and video for use by the media may not be taken without the express consent of the patient's owner. Verbal consent by the animal's owner is an acceptable means of gaining permission to photograph/video the patient. If a member of the media is present in the hospital and wishes to take background footage of clinicians and students working with animal, no close-up shots are permitted such that the animal would be identified by its owner. All media requests must be directed to the LSU – School of Veterinary Medicine Public Relations Coordinator.

## POSTINGS ON INTERNET/ SOCIAL NETWORKING SITES

Posting, releasing, or otherwise disclosing photos, identifiable case descriptions, images, or records related to the educational, clinical, or research activities of the LSU - School of Veterinary Medicine, outside of the LSU - School of Veterinary Medicine via social networking sites (e.g. MySpace, Facebook, Twitter, etc.) or via other than standard professional means of query and/or dissemination of educational, clinical, or research information is prohibited. This policy applies to all students, faculty, staff, clients, and visitors of the LSU - School of Veterinary Medicine and to all activities of the LSU - School of Veterinary Medicine, on or off campus, related to veterinary clinical services and teaching and research labs. Pictures of animals (whether owned by University or client), and client information are strictly forbidden from being published or posted on social networking sites such as "Facebook", "Twitter", and "Myspace"; and non-educational blogs, message boards, or internet websites; without the prior approval from an appropriate Supervisor, Department Head, Director of the LSU – School of Veterinary Medicine Veterinary Teaching Hospital, or the Director of the Louisiana Animal Disease Diagnostic Laboratory. This policy is to promote the safety and privacy of students, faculty, staff, clients, and visitors. Failure to comply with this policy could result in damage to persons or property, may be a violation of legal, professional, and/or ethical obligations, and may result in disciplinary action by the LSU - School of Veterinary Medicine, up to and including dismissal.

## ATTENDANCE REQUIREMENT

All students in the Phase II curriculum may be allowed a maximum of six (6) excused absences (this may be days or portions thereof, depending on the desires of the block mentor and course coordinator) which require no form of remediation. Additional days, for the days of the examination only, will be allowed to take the North American Licensing Examination. Examples of excused absences that may be allowed are: job interviews, state board examinations, family emergencies, illness, and attendance of professional meetings.

The block mentor shall have the final authority on granting an excused absence. Resolution of a dispute over excused absences shall be the duty of the Associate Dean for Student Affairs. Block mentors will be encouraged to allow any necessary excused absence, however insufficient student numbers on a block may preclude the approval of an excused absence. A maximum of two excused absences will be allowed per four week block and one excused absence per two week block. If a student exceeds the number of excused absences allowed per block then remediation may be required to pass the block (such as additional assignments or making up time lost).

If a student misses more than 2 days in any block's grading period, then remediation may be required. These missed days include boards and excused absences (i.e. travel to and from boards and the boards). All excused absences greater than the six days allowed may require remediation. A written notification to the Associate Dean for Student Affairs for approval will be required at least four weeks in advance in anticipation of any anticipated excused absence over 6, or as soon as possible after an unanticipated excused absence. The Course Coordinators will forward a copy of any excused absence to the VCS office for tabulation. A written confirmation of the absence may be required. A written excuse may be required. If a written excuse cannot be obtained, then the absence will be considered unexcused. Any unexcused absence will require remediation and/or possible failure of the block.

### **LSU SCHOOL OF VETERINARY MEDICINE ACADEMIC MISCONDUCT POLICY**

The LSU Code of Student Conduct applies to the School of Veterinary Medicine within the Code is the Academic Misconduct Policy, which outlines the School of Veterinary Medicine expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. Students are responsible for reading the LSU Code of Student Conduct Policy and for living up to their pledge **not** to violate the Code.

- I. It shall be a violation of this Code for a student to cheat.
- II. It shall be a violation of this Code for a student to knowingly circumvent any course requirement.
- III. It shall be a violation of this Code for a student to steal.
- IV. It shall be a violation of this Code for a student to purposely impair another student's educational opportunity.
- V. It shall be a violation to act in a manner which is detrimental to the moral and ethical standards of the veterinary medical profession.
- VI. It shall be a violation for a student to knowingly deceive another student, faculty member, or professional associate with the intent to gain advantage, academic or otherwise, for said student or for any other student.
- VII. It shall be a violation for any student to fail to report any infraction of the LSU Code of Student Conduct Policy to an appropriate representative.

LSU Code of Student Conduct can be found at: <http://saa.lsu.edu/code-student-conduct>

### **SEXUAL HARASSMENT POLICY**

The University reaffirms and emphasizes its commitment to provide an educational and work environment free from sexual harassment and to provide a means to remedy sexual harassment that employees may have experienced. ([PS-73 Sexual Harassment](#) and [PS-95 Sexual Harassment of Students](#))

The intent of this policy is to express the University's commitment and responsibility to protect its students from sexual harassment and from retaliation for participating in a sexual harassment complaint. It is not intended to infringe upon constitutionally guaranteed rights nor upon academic freedom. In considering allegations of sexual harassment, the University must be concerned with the rights of both the complainant and the accused.

All proven cases of sexual harassment shall result in appropriate disciplinary action. The severity of the disciplinary action shall be consistent with the seriousness of the act of sexual harassment. Additionally, under appropriate circumstances, the University may take action to protect its students from sexual harassment by individuals who are not students of the University. If the alleged harasser is a student, the Dean of Students Office must be notified of the complaint.

Student Advocacy & Accountability, Office of the Dean of Students, LSU Student Life & Enrollment, 340 LSU Student Union, Baton Rouge, LA 70803, Phone: (225) 578-4307 Fax: (225) 578-5637 [dossaa@lsu.edu](mailto:dossaa@lsu.edu)

### **GENERAL STATEMENT ON ACADEMIC INTEGRITY**

Louisiana State University adopted the Commitment to Community in 1995 to set forth guidelines for student behavior both inside and outside of the classroom. The Commitment to Community charges students to maintain high standards of academic and personal integrity. All students are expected to read and be familiar with the [LSU Code of Student Conduct](#) and [Commitment to Community](#), found online at [www.lsu.edu/saa](http://www.lsu.edu/saa). It is your responsibility as a student at LSU to know and understand the academic standards for our community.

Students who are suspected of violating the Code of Conduct will be referred to the office of Student Advocacy & Accountability. For undergraduate students, a first academic violation could result in a zero grade on the assignment or failing the class and disciplinary probation until graduation. For a second academic violation, the result could be suspension from LSU. For graduate students, suspension is the appropriate outcome for the first offense.

## AMERICANS WITH DISABILITIES ACT

Louisiana State University is committed to providing reasonable accommodations for all persons with disabilities. The syllabus is available in alternate formats upon request.

Students with disabilities: If you are seeking classroom accommodations under the Americans with Disabilities Act, you are required to register with Disability Services (DS). DS is located in 115 Johnston Hall. Phone is 225/578-5919. To receive academic accommodations for this class, please obtain the proper DS forms and meet with me at the beginning of the class. The Office of Student and Academic Affairs can help you if you have questions as well.

<http://disability.lsu.edu/students>

## SYLLABUS CHANGE POLICY

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advanced notice.

## SVM INSTITUTIONAL LEARNING GOALS/OBJECTIVES ALIGNED WITH COMPETENCIES

SVM 9 +1 Clinical Competency Anchor Points			
<b>Competency One:</b> <i>Comprehensive patient diagnosis (problem solving skills), appropriate use of clinical laboratory testing, and record management</i>	<b>Aligned with VMED 5463 Learning Objective</b>	<b>Assessment Method</b>	<b>Teaching Method</b>
1.2 Patient Assessment/Clinical Thinking Skills	1,2,3,5,7	Direct observation	Clinics
1.3 Knowledge Base/Basic Pathophysiology	1,2,3,5,8	Direct observation	Clinics
1.4 Diagnostic Skills/Clinical Laboratory Assessment	1,2,3,4,5,6,8	Direct observation	Clinics
<b>Competency Five:</b> <i>Basic medicine skills, experience and case management</i>	<b>Aligned with VMED _____ Learning Objective</b>	<b>Assessment Method</b>	<b>Teaching Method</b>
5.1 Basic medical skills/ Case Management	1,2,3,5,8	Direct observation	Clinics
<b>Competency Eight:</b> <i>Client communications and ethical conduct</i>	<b>Aligned with VMED _____ Learning Objective</b>	<b>Assessment Method</b>	<b>Teaching Method</b>
8.2 Working with Health Care Team	7,8	Direct observation	Clinics
<b>Competency Nine:</b> <i>Critical analysis of new information and research findings relevant to veterinary medicine</i>	<b>Aligned with VMED _____ Learning Objective</b>	<b>Assessment Method</b>	<b>Teaching Method</b>
9.2 Demonstrate effective use of literature, references and informational technology in support of diagnosis, case management, and continuing medical education.	1,2,3,4,5	Direct observation	Clinics
<b>Competency Ten:</b> <i>Comparative Pathobiology: In the clinical setting discuss and apply basic science (physiology, immunology, histology, neuroscience, anatomy, etc.) to clinical cases within and across common species and between animal classes (mammals, birds, fish, reptiles, amphibians, etc.).</i>	<b>Aligned with VMED _____ Learning Objective</b>	<b>Assessment Method</b>	<b>Teaching Method</b>
10.1 Comparative and developmental physiology & anatomy	1,2,3,5,8	Direct observation	Clinics
10.3. Apply central biological principles and mechanisms on a cellular, systemic, and population level.	1,2,3,5,8	Direct observation	Clinics