

**College of Veterinary Medicine  
University of Florida  
Course Syllabus**

**Name of Course:** Advanced Small Animal Arthrology – Disease, Reconstruction, and Arthroplasty

**Course Number:** VME 6XXX

**Catalog Description of Course:**

- This course will be an intensive review of advanced surgical and medical management of joint diseases and injuries in dogs and cats. The first three lectures will focus on the etiology, pathophysiology, manifestation and diagnostic strategies of degenerative, immune mediated, and septic arthropathies. The majority of the course will be devoted to an in-depth discussion of specific surgical techniques used to address joint instabilities using biologic or prosthetic reconstruction techniques. Catastrophic joint injuries involving joint replacement or arthrodesis will also be included. There will be generic reviews of the attributes of various broad categories of modalities used to stabilize joint injuries in dogs and cats as well as isolated reviews of specific implant systems and their applications and reported efficacy and deficiencies. Each major joint of the hind and forelimbs will be covered in detail. The review will focus on management of joint disease/injuries in dogs and cats, but comparative aspects relating to analogous conditions in human patients will be included.

**Prerequisites, Co-requisites and Enforced Prerequisites**

- Students with a baccalaureate degree, particularly students who are enrolled in a graduate clinical or laboratory medicine or surgical training program, would likely benefit from this course's content. In addition, senior students pursuing a baccalaureate degree, most likely students enrolled in a premedical program such as animal science, biology, or physiology can enroll with permission of the course coordinator.

**Maximum enrollment:** 15 students

**Number of term credits:** 1

**Duration and class times:** Lectures will be scheduled one morning each week from 8:30-9:20 AM to accommodate clinical responsibilities of involved residents and faculty. The course will span the duration of the semester.

**Lecture room:** Small Animal Hospital, Banfield B Room (340 B)

**Instructors**

Daniel Lewis, DVM, Diplomate ACVS, Professor  
Department of Small Animal Clinical Sciences

Lewisda@ufl.edu  
352-317-8803

Stanley Kim, BVSc, MS, Diplomate ACVS-SA, Associate Professor  
Department of Small Animal Clinical Sciences  
stankim@ufl.edu  
352-392-2235

Matthew Johnson, DVM, MVSc, Diplomate ACVS-SA, Clinical Associate Professor  
Department of Small Animal Clinical Sciences  
mdjohnson@ufl.edu  
352-392-2235

Adam Biedrzycki, BSc(Hons), BVSc(Hons), PhD, MRCVS, Diplomate ACVS-LA, DECVS  
Department of Large Animal Clinical Sciences  
dradam@ufl.edu  
608-609-7584

**Course organizer/coordinator:**

Matthew D Johnson, DVM, MVSc, Diplomate ACVS-SA  
Clinical Associate Professor Small Animal Surgery  
Department of Small Animal Clinical Sciences  
mdjohnson@ufl.edu  
352-214-2712

The best way to contact the coordinator [or any of the instructors] is via email. If needed, we would be happy set up a time for individual phone calls.

**Course Objectives**

This course is designed for graduate students or post-doctoral who are pursuing a career in academic medicine. The course will focus on the etiology and management of both clinical or applicable experimental management of acquired joint disease or instability in companion animals such as dogs and cats.

- Students will examine the pathophysiology including histologic and biomechanical events associated with the acquired joint disease (septic or auto-immune) as these conditions occur in dogs and cats.
- Students will interpret and compare translational aspects of analogous joint instabilities in human patients.
- Students will examine and critique the advantageous and detrimental properties and characteristics of materials commonly used to make orthopedic implants for joint stabilization.
- Students will examine the mechanical properties of generic joint stabilization modalities (reconstruction or replacement).

- Students will distinguish the positive and negative attributes, including citing results of biomechanical evaluations as well as reported clinical applications, of specific implant systems used in managing joint instability or replacement in dogs and cats.
- Students will be able to formulate appropriate surgical management when applicable, using each of the implant systems discussed in the course.
- Students will be able explain specific pathologies unique to the joints discussed in the lectures of the course.
- Students will be able to develop appropriate treatment options and possible post-operative complications for each of the joint stabilization or replacement types discussed in the joint specific lectures.

#### Topical outline of lectures:

<b><i>Week</i></b>	<b><i>Topic</i></b>	<b><i>Instructor</i></b>
1	Septic arthritis – pathophysiology, diagnostics, therapeutic options & prognosis	Biedrzycki
2	Immune mediated joint disease – diagnosis & treatment	Walton
3	Advanced diagnostic imaging options for joints	Pozzi
4	Intra-articular therapies for degenerative joint disease	Shmalberg
5	Concepts and biomechanics of joint reconstruction	Banks
6	Shoulder – congenital luxation & medial shoulder instability treatment modalities & decision matrix	Pozzi/Kim
7	Elbow – classification & treatment options for congenital & traumatic luxations	Lewis
8	Lab – shoulder & elbow stabilization techniques	Johnson/Lewis
9	Carpus – carpal instability treatment options & arthrodesis techniques	Lewis
10	Tarsus – acquired tarsal instability diagnostics & stabilization techniques	Johnson
11	Lab – carpal & tarsal stabilization techniques	Lewis/Johnson
12	Stifle – traumatic Stifle injuries – stabilization techniques and decision matrix for isolated collateral ligament injuries & deranged stifle	Kim
13	Hip – traumatic hip luxation treatment options & surgical stabilization techniques	Kim
14	Lab – Hip & stifle stabilization techniques	Kim
15	Final Exam	

#### Grading Scale

	<b><u>Percentage</u></b>
A	90 or above
A-	87-89
B+	84-86
B	80-83
B-	77-79
C+	74-76
C	70-73
C-	67-69
D+	64-66
D	60-63
D-	57-59
E	56 or below

For more information on grade points and UF grading policies, see <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

## **Assessment**

**Pre- or Post-Lecture Work Sheets:** Students will be given work sheets to help them prepare for lecture or re-enforce concepts presented in lecture. Work sheets will be designed to educate the student by researching specific topics, often directing the student to a specific peer reviewed article or text book, covered in lecture.

**Lecture Presentation:** Each individual student will be assigned a specific topic to generate a brief presentation to deliver to the class. Presentations will be graded on content including the thoroughness of researching literature to support the presentation as well as the organization and clarity of presentation.

**Final Examination:** One final exam will be administered during the semester. The exam is worth 50% of the students' grade. Specific details regarding the exams and proctoring will be given closer to the exam dates. The exam will be 50 minutes in length. The cumulative final examination will cover clinically pertinent, evidence-based material from lectures and laboratories presented in a case-based format with case questions generated by students in their case presentation assignments. The format will be a combination of short answer, fill in the blank, and multiple-choice questions. A mandatory final exam review period will take place the week after the final exam to facilitate group discussion of the correct answers.

## **Assessment Breakdown**

Work Sheets	30%
Lecture Presentations	20%
Final Examination	50%
Total	100%

**Make up and attendance policy:** Please contact Dr. Matt Johnson directly regarding any serious illnesses, family emergencies, or prolonged absences that result in missed work. Any absences will require written verification. As a student, it is your choice to take all exams. If you choose to not fulfill an assignment or take the examination because of

another activity (work, social engagement, etc.), then you will earn a zero for the grade. If the examination in this course conflicts with an examination in another course, please contact Dr. Matt Johnson as early in the semester as possible to coordinate an alternate examination time. <https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/>

**Textbook:** The recommended textbooks for this course are:

Veterinary Surgery: Small Animal, 2<sup>nd</sup> ed. by Johnson and Tobias

Small Animal Surgery: 4<sup>th</sup> ed. by Fossum, 2013

Brinker Piermattei and Flo's Handbook of Small Animal Orthopedics and Fracture Repair 5<sup>th</sup> ed 2016 by DeCamp, Johnston, Dejardin and Schaefer

Applicable scientific manuscripts pertaining to topics discussed in lecture

**Course structure:** The course is structured to be delivered over the 15 weeks of the semester – with 14 lecture periods and a final examination. There will be one lecture scheduled each week of the semester.

**Office hours:** Office hours are available by email appointment with Dr. Matt Johnson. To schedule office appointments, please contact Dr. Johnson via email at [mdjohnson@ufl.edu](mailto:mdjohnson@ufl.edu)

### **Instructor Evaluation**

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu> on the final day of the clerkship. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

### **Academic Integrity**

Academic UF students are bound by The Honor Pledge, which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: ‘On my honor, I have neither given nor received unauthorized aid in doing this assignment.’” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honorcode/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor.

### **Disability Resource Center**

<http://www.dso.ufl.edu/drc/>

Students in need of accommodations should directly contact the DRC to begin the approval and implementation process. The Disability Resource Center (DRC) is located

on the main UF campus and is available for students who request accommodations. OSI on the CVM campus works closely with the DRC to ensure student accommodations are met as articulated by the DRC. The DRC is able to assist students in receiving accommodations such as extended time for exams, low distraction environment, test reader or scribe and note-taking services. Please contact the DRC for more information on their processes and requirements (352-392-8565).

Contact information for the Counseling and Wellness Center:  
<http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575

Contact information for the University Police Department: 392-1111 or 9-1-1 for emergencies.

### **Student Wellness**

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact [umatter@ufl.edu](mailto:umatter@ufl.edu) so that the U Matter, We Care Team can reach out to the student in distress. Nighttime and weekend crisis counselors are available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Other resources include:

Contact information for the Counseling and Wellness Center:  
<http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575

Contact information for the University Police Department: 392-1111 or 9-1-1 for emergencies.