Welcome! We are truly excited to have you as part of the Cornell Ruffian team and look forward to having a great experience with you over the next year.

The Cornell Ruffian Equine Specialist (CRES) center has four (4) internship positions each year for twelve (12) months duration. The program is designed to provide a positive learning environment for junior veterinarians to develop their practical skills and theoretical knowledge in equine specialty practice.

You will work alongside several specialist veterinarians and dedicated equine technicians to service the horse owning/training community of New York and surrounding states.

CRES center offers 24 hours a day service to all clients with regular hours from 8am to 5pm, Monday to Friday, and emergency/critical care coverage at all other times, 7 days a week. As an intern at CRES, you will be expected to participate in all aspects of scheduled and emergency case management with your clinician supervisors.

**CLINICIANS**

Dr Sam Hurcombe BSc BVMS MS DACVIM DACVECC – Surgery (abdomen), critical care and internal medicine

Dr John Pigott DVM MS DACVS – Surgery (general), imaging and performance medicine

Dr Norm Ducharme DVM MS DACVS (based in Ithaca) – Surgery (airway focus), lameness, treadmill

Dr Alan Nixon BVSc MS DACVS (based in Ithaca) – Surgery (orthopedic) and lameness

Dr Michelle Delco DVM PhD DACVS (based in Ithaca) – Surgery (orthopedic) and lameness

Dr Ed Earley DVM DACVD – Specialty dentistry
**STAFF**

Jill Nordberg – Practice manager, anesthesia  Kayle Rave – Client services  
Caroline Aviles – Client services  Courtney Kious – Anesthesia, ICU  
Lindsay Conologue – lead tech, surgery, MRI  Jen Soper – ICU, Imaging  
Michelle Manfrede – ICU/nights  Joann Rinaldini – ICU/nights  
Katelyn Trzcinski – Imaging, ICU  
Jack Jackson – Barn crew  Peggy Dunleavy – Barn crew

**TIME OFF**

- Interns are given **four (4) weekends off every eight weeks** (Friday 6pm through Monday 7am).
- Interns receive **two (2) weeks off per year** (Monday through Sunday = 1 week) to be used at their discretion (e.g., vacation/ continuing education, residency program interviews etc).

All time off is to be requested in writing (email) to Dr Hurcombe (sdh223@cornell.edu) and Jill Nordberg (jnn25@cornell.edu) no less than 30 days PRIOR to the intended off clinics date, per Cornell University policy.

Off clinics time cannot be taken during the initial three (3) month probationary period or when another intern is scheduled out of the clinic.

**DAILY ROUTINE**

- Your arrival time is **NO LATER THAN 7AM**.
- Your day begins by assessing the inpatients of the hospital.
- Preference should be given to critical cases first then less critical cases.
- Every patient must have a complete physical examination performed, medications administered, lab tests submitted (as applicable) and medical record updated in the computer system (EasyVet) by 8:15am. If any concerns are found or raised by you or technicians about a case, you are expected to evaluate the patient and report to the clinician who is primarily responsible with your findings.

Morning Arrivals (7:30am) - Interns work with the technicians to receive new patients. Each new patient needs a consent signed, a physical examination, +/- IV catheter placed in order to facilitate the day’s activities.
INPATIENT ROUNDS:

- **MONDAY through FRIDAY:** 8:15am and later in the afternoon after the days' activities are completed.
- **WEEKEND/UNIVERSITY CLOSURE DAYS:** 8:30am/9am only with the on call clinician.
  - Specific concerns need to be articulated to the primary clinician on the case. If that clinician is unavailable, defer to the clinician on call.

**Weekdays:** Immediately after discussing patients, a run-down of the day and sequence of events will be made to optimize flow of the day.

It should be clear what is happening when, who is in charge of the case and what your responsibilities are. If not, it is prudent for you to ask.

**Weekends:** When scheduled as ER/ICU, you are expected to evaluate your patients each morning and evening. In the event of only a few cases and/or very low maintenance cases, you may be able to split the responsibility with your intern mate, but this is on a weekend by weekend basis. The expectation is that you ensure the hospital is looked after during weekend hours.

ROTATIONS

**Rotations:** Interns participate in a rotation based experience. Each rotation lasts two (2) weeks.

Your first month at CRES will have a heavy emphasis on developing your anesthesia skills and radiography skills. Around the 2 month time point, you will have primary responsibility providing anesthesia support. You may start rotating earlier depending on your comfort level, skill level and following review of your skills and comfort level.

** Depending on the day, interns may be reassigned to outpatients primarily to facilitate the day’s flow including physical exams, radiographs, endoscopies, and minor procedures.

**Rotation #1: Afterhours Emergency and ICU (6pm to morning rounds)**

Interns will be responsible for taking in emergencies afterhours and managing those cases until rounds the following morning. If surgical, the intern will assist with these procedures. Interns are also responsible for the care of inpatients working with night staff.

- Interns round with the overnight technician at the start of the technician’s shift
- Interns perform a physical examination and chart review on all inpatients at the start of their shift
- Interns are physically present at midnight and 6am treatments, working with the technicians and examining the patients.
• Interns are expected to foster a positive teaching environment with overnight technicians and externs (when present).
• Interns are present for case transfers in the mornings (8:15 am).

**Rotation #2: Internal Medicine & Day Emergency**
Interns will assist in the work-up and management of internal medicine and emergency cases during the day. Interns may also participate in supporting the anesthesia service (general anesthesia and standing sedation (e.g. standing surgery or MRI). You are expected to develop sound physical examination skills, become proficient in intravenous catheterization, nasogastric intubation, rectal examination, ultrasonography, and other minor techniques. For surgical emergencies (e.g., colics) you will assist the primary surgeon and maintain post-operative care.

**Rotation #3: Surgery**
Interns will assist in elective surgical procedures. There is an expectation that the surgical intern has evaluated lab work, has imaging studies ready for the OR, and has read up on the surgical procedure. On this rotation you will learn surgical principles and be involved in assisting the primary surgeon. Depending on the schedule and complexity of the procedure, you will participate to a greater or lesser extent. The surgical intern will also work on outpatient surgical cases i.e. lameness evaluations, radiography, with the on service surgeon.

**Rotation #4: Imaging/Anesthesia**
Interns will have primary responsibility to provide standing sedation, general anesthesia and assist/perform diagnostic imaging modalities.

It is also the expectation for the imaging/anesthesia intern to provide out of hours anesthesia support for the emergency service, including being back up to the overnight intern when there are multiple case admissions at once.

On down time, the imaging/anesthesia intern is expected to also develop student teaching modules for visiting externs and Cornell students.

General anesthesia cases must be recovered with a DVM present. In general both the surgical intern and anesthesia intern will be present.

**CASE TRANSFERS/PATIENT UPDATES – intern to intern “patient check-in”**
Explicit instruction between day time interns and night interns on each case in the hospital should occur twice daily at shift changes (typically 6am and 6pm). This is to ensure continuity of care occurs for any 24 hour period of time.

**Client communications:** Daily updates, progress reports to clients will largely be given by the primary clinician on the case. However, there will be cases where we ask you to continue with client communications, especially the more stable, long term cases etc. This will be on a case by case basis.

**RECORDS AND WRITTEN COMMUNICATIONS**

**Electronic Records**

We use the EasyVet software program for all medical records, contact information and billing information. You will be receiving an orientation to the program during your first week starting at CRES with Mrs. Jill Nordberg (practice manager).

**Inpatients**

- A completed physical examination and SOAP is entered into EasyVet for **every day** the horse is hospitalized. This should be done **PRIOR** to rounds each morning following your morning assessment. These are typed into the day’s “Index Card”.
  - Any significant changes to a patient’s status (ie clinical status, lab results etc) should also be added with a time-stamp.
• All charges accrued by a patient afterhours (nights and weekends) including board, procedures, medications, ICU level, etc, need to be entered daily to ensure accurate and current charges are known for all patients.
• Daily ‘flow sheets’ need to clearly reflect treatments/procedures performed. Please write legibly.
• Charges accrued by patients during regular business hours may be entered by the interns or technicians involved with the patients.
• All bills are audited prior to horses leaving however it is your responsibility to ensure appropriate charges are entered for out of hours care.

Outpatients

• A complete physical examination should be performed on every single horse that enters the hospital. Findings should be written in the “Index Card”.
• Charges for procedures, medications, etc can be performed by interns or technicians, depending on who was involved in the evaluation of the patient.

Surgery Reports

Interns directly participating in surgical procedures are expected to write a detailed surgery report in EasyVet by 24 hours (the following day). These will be reviewed by the primary surgeon for accuracy and content.

Written Forms/Records

Admission Consent Forms

Every horse that enters CRES is to have a consent/estimate form signed. If unsure of the estimate for a visit, please ask the primary clinician scheduled to receive the horse or Jill Nordberg.

Owner/Client Information including Billing Information (After hours)

Interns are responsible for having client and patient information forms filled out to the best of their ability for horses coming in on emergency. Names, addresses, contact numbers and insurance (if applicable) information is needed.

Client financial details (credit card information) is also needed to be collected including responsible financial party contact details, credit card number, expiration, and CVV. If unsure, please ask the primary clinician scheduled to receive the horse or Jill Nordberg.

Note: During regular business hours, the front reception personnel will collect this information.

Physical Examination Forms/Colic Examination Forms
All horses coming to CRES need an initial physical examination and findings should be written on the admission physical exam form (or colic exam form if relevant). This information will also be entered into the electronic record on the “Index Card”.

ICU Orders

ICU orders are written in blue/black pen and yellow highlighters. These should be written in discussion with the primary clinician. ICU orders need to be explicit, detail oriented, accurate and legible. This includes feeding instructions, catheter flushes etc.

Call parameters need to be stipulated for every horse including HR, RR, Temp and anything specific to that case i.e. bleeding, chest tubes, airway watch etc.

Medications should be written as “drug name (not generic name), amount in mg, g, units, volume or number of tabs etc in parenthesis, route of administration, frequency” with important details highlighted.

Examples:

Gentamicin 3g (30ml) IV q24 hours  
K-Pen 10 mU (20ml) slow IV q6 hours  
Metaclopramide 40mg (8ml) SQ q 6 hours

All ICU orders should be verified by the primary clinician once written. All contact details (cell phones) for both intern and primary clinician should be clearly written on all order forms too.

Documentation of Conversations

Any communication with primary clinicians, clients etc need to be updated in the patient record. If you’re asked to do a procedure, give a medication, please enter it in the patient record and sign/initial the entry. It is better to err on the side of over communicating than under communicating.

TEACHING

Veterinary student externs will rotate for 1 or 2 week rotations in the clinic. Interns are integral in helping externs acclimate to the clinic and help them orient to the daily routine. There is an expectation of active teaching on the part of all hospital employees and we encourage interns to begin developing their teaching skills in terms of knowledge and clinical application as well as leading by example with appropriate conduct and comportment.
Cornell Ruffian CODES OF CONDUCT

Dress Code and Personal Appearance: Interns, like all staff, are expected to wear clean work appropriate attire while at the clinic at all times **including weekends**. We want to maintain professionalism at all times which includes appearance, comportment, and attitude.

- Khaki pants and a polo t-shirt are suitable when meeting clients and during the day.
- Footwear: close toed shoes must be worn at all times. Crocs/rubber shoes are acceptable **in surgery only**.
- Scrubs are acceptable during out of hours. Jeans are discouraged.
- Coats, jackets, and hats with **non-Cornell Ruffian logos are strongly discouraged** especially as outer wear.
- Hats with distracting tassels, pom-poms etc should not be worn around horses.
- Hair should be neatly done.

Rules of Conduct: As an employee of CRES/Cornell University, you are expected to work within the limitations and expectations of Cornell University.

Collegiality/Team Work: We work hard to foster a positive learning environment and expect you to have a team oriented way of conducting yourself. Team work, professionalism, collegiality, respect, civility and a great work ethic will help you get the most out of this experience. Be mindful of non-verbal body language also.

Confidentiality: Please remember to maintain confidentiality regarding patient management and client information. It is incredibly important in keeping client trust. As such, photos of interesting procedures, lesions etc can only be taken for personal use only with no identifying client or patient information and only with explicit permission can be posted to the CRES social media sites e.g., facebook.

Biosecurity: We are all expected to be good stewards of the hospital and adhere to hospital protocols. Please read through and familiarize yourself with the hospital biosecurity protocol. Any specific questions can be referred to Dr Hurcombe (biosecurity officer).

Alcohol/Illegal Substance Use: Under no circumstances are employees allowed to work under the influence of alcohol or other mind altering substances. Employees risk termination of employment. Alcohol is not permitted on the premises unless approved for CRES event (i.e. continuing education etc).

PERFORMANCE REVIEWS

*Formal reviews*
Formal reviews are conducted in December with input from all clinicians and technicians in the hospital. We will discuss these reviews and you will receive a copy of the review. These are sent and recorded upstate at Cornell in Ithaca.

**Informal reviews**

**Probationary period:** All interns work under the terms of a probationary period of three (3) months from the beginning of their program (beginning of October). At 3 months, interns will have an interim evaluation with Drs Hurcombe, Pigott and Jill Nordberg about how their progression is going in the program. If major concerns become evident prior to the 3 month evaluation, these will be dealt with at that time.

### INTERNSHIP EDUCATIONAL EXPERIENCES

**Journal Club/Topic Rounds (CRES):** Thursday at 3pm. Each week, the intern on Rotation #1 (ER/ICU) will choose and distribute one or two journal articles from recent literature. This should be distributed prior to the preceding weekend. The intern will lead a discussion among peers. Techs are also invited to these sessions.

**Surgery Rounds (WebEx with Ithaca):** Fridays at 8am. We will participate with resident case presentations. Interns will also participate and present cases to the upstate group every 4 weeks.

**Intern Case Presentations (CRES):** We would like for each intern to present two (2) cases during the year to the hospital staff. You should include pertinent history, physical examination findings, diagnostic evaluation, procedures, treatments and outcome on a case seen in the hospital. You will also provide an overview of the important new literature related to the case i.e. disease/condition or new surgical approach etc.

**CE/Publication** – The genesis and publication of a peer reviewed journal article from the CRES/Cornell University caseload is encouraged. By completing this task, you are eligible for up to $600 is financial assistance reimbursement for continuing education (CE) related activity or purchases.
SPECIFIC SKILL AREAS

A. DEVELOPMENT OF DIAGNOSTIC AND THERAPEUTIC SKILLS

1. Communications - records / insurance / costs / after care reports
2. Thorough patient monitoring
3. Drug / fluid administration
4. Indications for and use of pathology
5. Complete lameness evaluation
6. Routine diagnostic nerve and joint blocks
7. Radiology - legs / chest / head / abdomen
9. Ultrasonography - tendons / chest / pelvis / abdominal / cardiac
10. Nuclear scintigraphy

B. SURGERY

1. Determining suitability of surgical candidates / cases for surgical referral
2. Pre-operative considerations
3. Intra and post-operative complications
4. Assisting in a range of surgical procedures
5. Post-operative considerations and necessary management
6. Competence in routine surgical procedures including:
   - Castration
   - Minor surgical procedures such as management of septic joints and tendon sheaths, localized infections, neurectomies, sequestrum and splint bone removals
   - Evaluation and treatment of wounds and joint lavage
   - Cast application
   - Regional perfusion techniques

C. MEDICINE

1. Thorough clinical examination and specific organ system exams (i.e. neurologic examination)
2. Indications for and competence in performing diagnostic tests:
   - Transtracheal wash
   - Bronchoalveolar lavage (non-endoscopic)
   - Chest ultrasound and thoracocentesis
   - Chest radiograph
   - Intravenous catheterization and fluid / electrolyte maintenance
   - ECG
   - Rectal examination
   - Abdominocentesis
   - Catheterize bladder
   - Ultrasound guided biopsies
D. ANESTHESIA

1. Pre anesthesia examination
   patient assessment & examination
   pre GA lab work & interpretation
   patient handling

2. Anesthetic planning
   considerations for surgical procedure including pain management
   drug regimes & doses
   monitoring & support plans
   anesthesia recovery management

3. Specific anesthetic techniques:
   standing sedation
   standing surgery
   analgesia
   short term parenteral GA
   inhalation GA

4. Monitoring – assess & interpret:
   anesthetic depth
   cardiovascular function including ECG, pulse monitoring, mucous membrane color & blood pressure
   respiratory function including pulse oximetry, end-tidal CO₂ & arterial blood gases

5. Technical skills
   Horse handling and anesthesia
   Intravenous catheterization
     Jugular, cephalic, lateral thoracic veins
   Intubation techniques
   Emergency resuscitation
   Arterial catheterization
   Positive pressure ventilation
   Arterial blood gas sampling measurement & interpretation
   Anesthetic equipment set-up, testing & problem solving
   Anesthetic record keeping, drug and surgery log maintenance

6. Recognition & management of problems:
   anesthetic depth too light or too deep
   bradycardia
   poor perfusion
   hypotension
   hypoxemia
   hypoventilation
   emergency resuscitation
7. Recovery management
   support of horses recovering from anesthesia
   recognition of complications & management

8. Analgesia
   Pre-anesthesia
   Intra-operative
   Recovery
   Post-surgery

E. OPHTHAMOLOGY
   1. Relevant history taking
   2. Routine diagnostic procedures including nerve blocks, direct ophthalmologic
      exam, corneal cytology
   3. Medical and surgical treatment of routine and difficult cases including SPL tube
      placement

F. CLINICAL PATHOLOGY
   1. Appropriate sampling for hematology, biochemistry, cytology, bacteriology and
      histology
   2. Experience in instrumentation, technique and interpretation of routine hematology,
      cytology and bacteriology

Revised: March 14, 2016
S. Hurcombe