

Veterinary Technology

A Broad and Exciting Career Choice

VET TECH



**What My Friends
Think I Do**



**What My Parents
Think I Do**



**What Society
Thinks I Do**



**What My Clients
Think I Do**



What I Think I Do



What I Really Do



SO WHAT IS IT *REALLY* LIKE TO GO THROUGH THIS PROGRAM AND TO BE A VETERINARY TECHNICIAN?

DURING THE FIRST TWO SEMESTERS. . .

OFFICE PRACTICES

ANIMAL BREEDS AND HUSBANDRY

ANATOMY AND PHYSIOLOGY

MEDICAL TERMINOLOGY

PARASITOLOGY

AND DISEASES 1



**YOUR INTRODUCTION TO VETERINARY
TECHNOLOGY STARTS WITH OFFICE
PRACTICES**

Many people think that veterinary technicians work mostly with animals and not so much with people. Do you think this is true?

1. Yes?
2. No?

Vet Tech work with people at least as much as they do animals, probably more!



Office Practices includes. . .

- Veterinary Practice as a business.
- The legal and ethical responsibilities of being a licensed veterinary health care professional
- How Veterinary Practices are managed.
- How to communicate with clients.
- How to take medical histories and keep medical records

Office Practices includes. . .

- Licensing requirements for a registered Veterinary Technician.
- Application of Occupational Safety and Health Administration requirements in practice.
- Advanced Training and Specialties available to Registered Vet Tech.



**AND YOU LEARN ALL ABOUT YOUR
PATIENTS' NEEDS AND LIFESTYLES SO. .**

There's breeds and husbandry where...

- You will learn to identify all the breeds of dogs, cats, horses, cattle, goats, sheep



There's breeds and husbandry where...

- You will also learn the husbandry of all the common species.
- How do they need to be housed, fed, managed.
- What are their common behaviors and common problems.



What breed of dog is this?

1. Siberian Husky
2. German Shepard
3. Norwegian Elk Hound
4. Akita





The Study of the Structure and the Function of Living Bodies

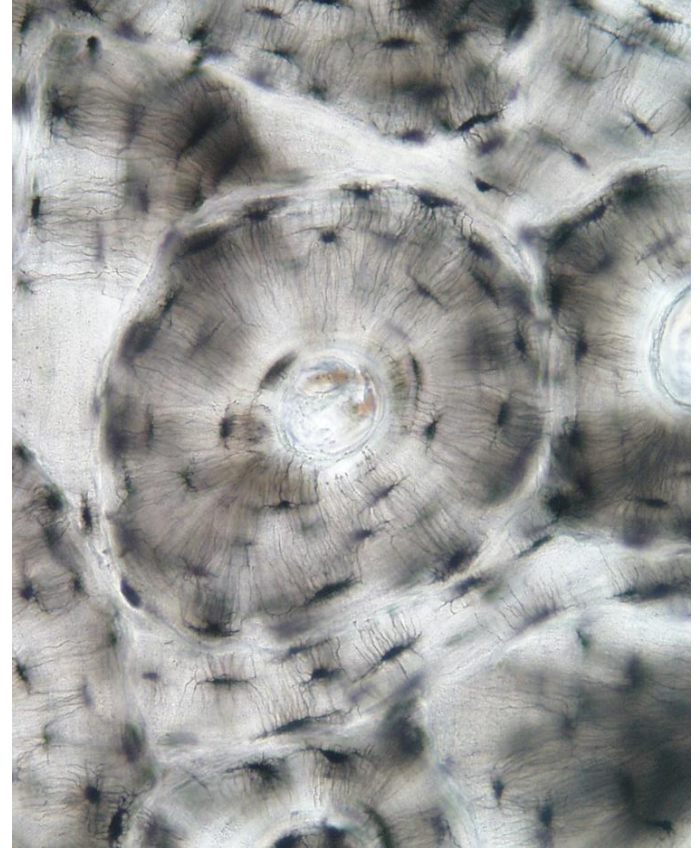
ANATOMY AND PHYSIOLOGY

Anatomy and Physiology

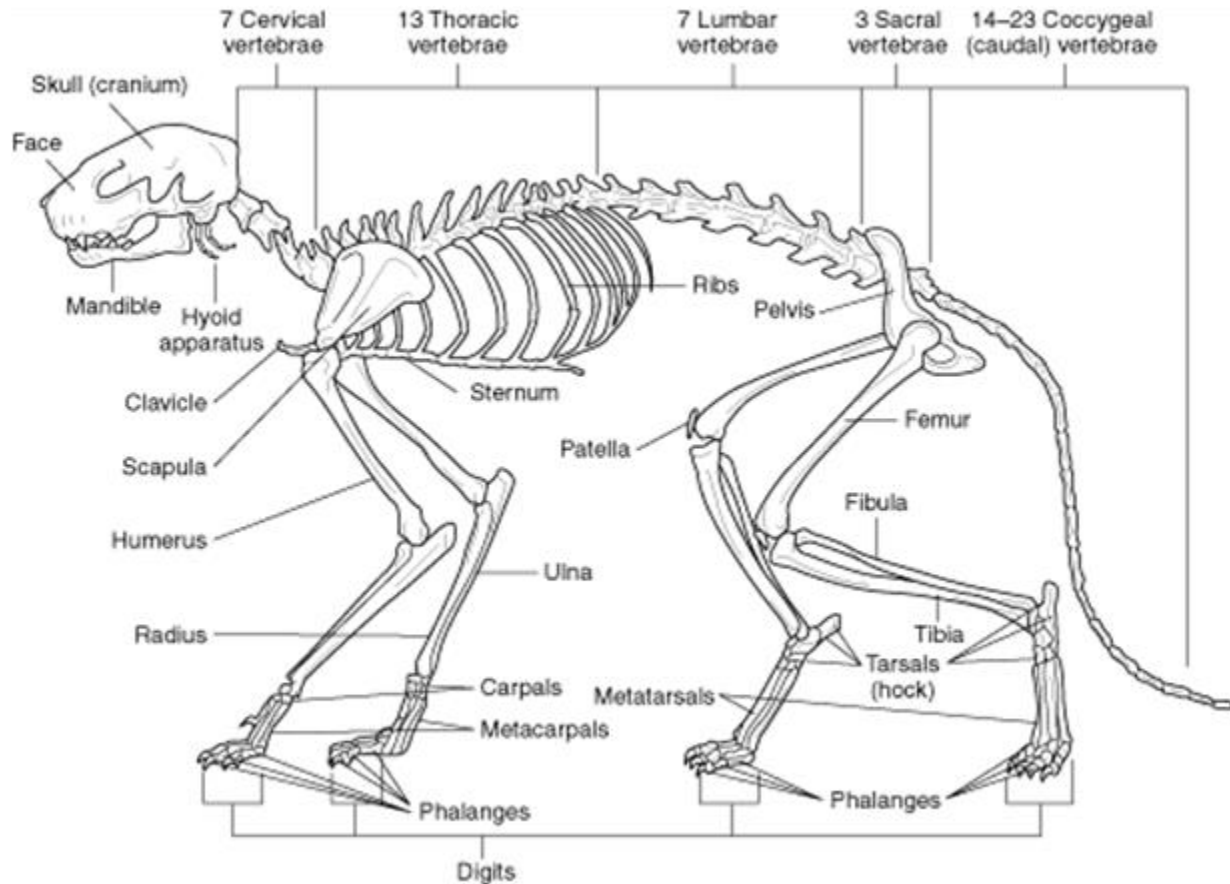
- A highly scientific, fast paced course on the anatomy and the physiology of the common species we encounter in practice.
- This includes an up close and detailed look at the bodies of the animals that we treat.

Anatomy and Physiology

- You will learn how cells in the body function and how does the DNA works.
- You will learn what tissues are made up of and how organs are formed.

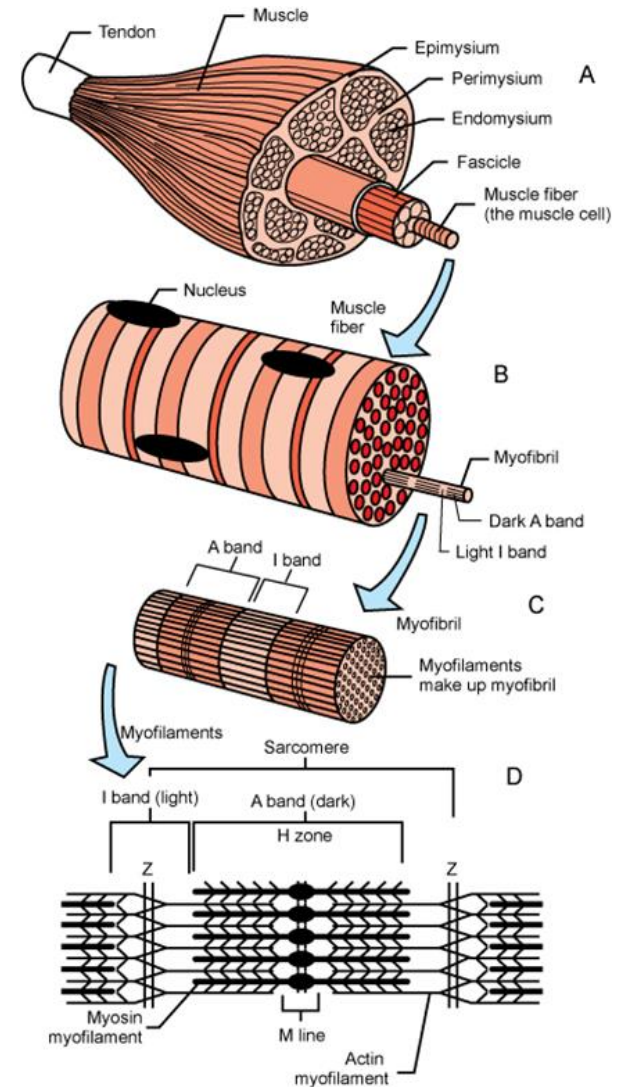


You will learn all the bones of the body and how they interact.



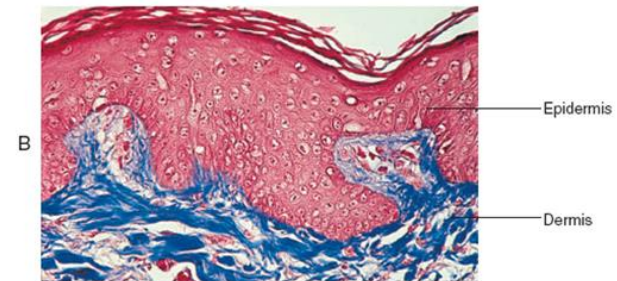
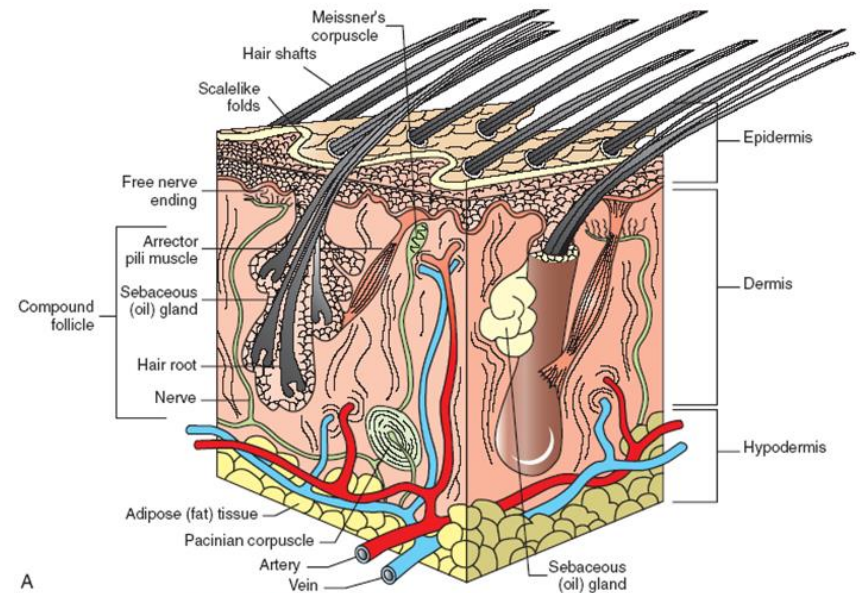
You will learn the anatomy and physiology of all of the body systems

- You will learn the physiology of muscle contraction, what neurotransmitters and electrolytes are involved



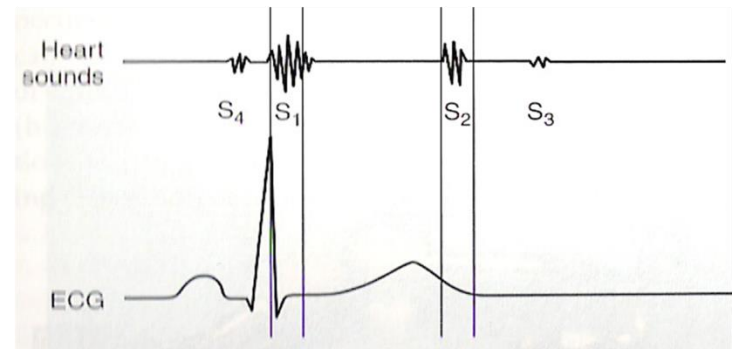
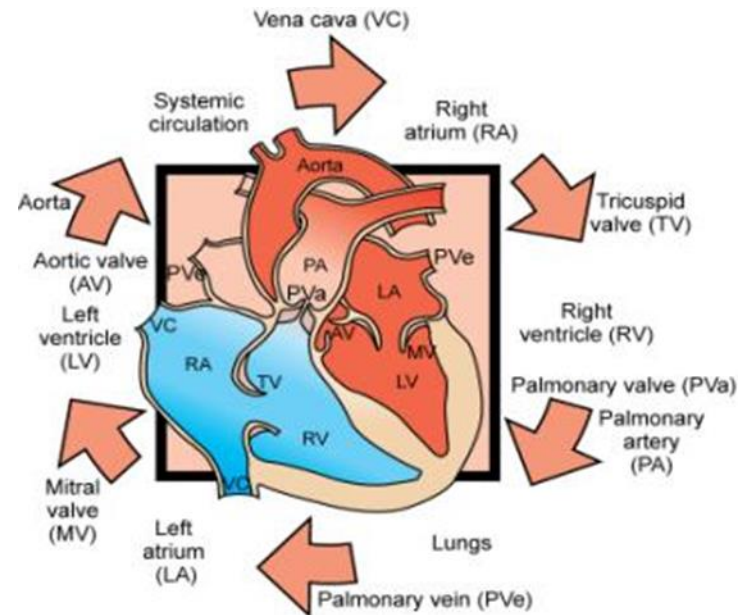
You will learn the anatomy and physiology of all of the body systems

- What are all the layers of the skin and how do they work together.



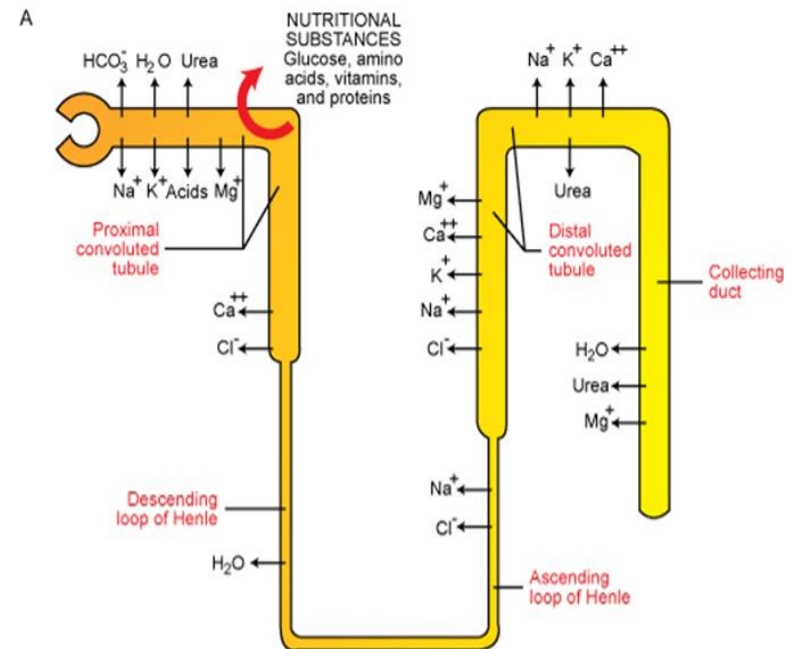
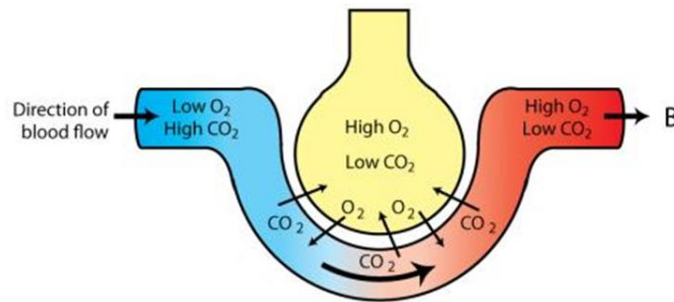
You will learn the anatomy and physiology of all of the body systems

- You will learn to trace the blood flow through the heart. You will learn all the valves and how the electrical signals we see on the ECG cause the heart to contract. What does the normal heart sound like? How about an abnormally functioning heart?



You will learn the anatomy and physiology of all of the body systems

- How do lungs exchange oxygen and carbon dioxide?
- How do the kidneys filter wastes out of the blood?



You will learn the anatomy and physiology of all of the body systems

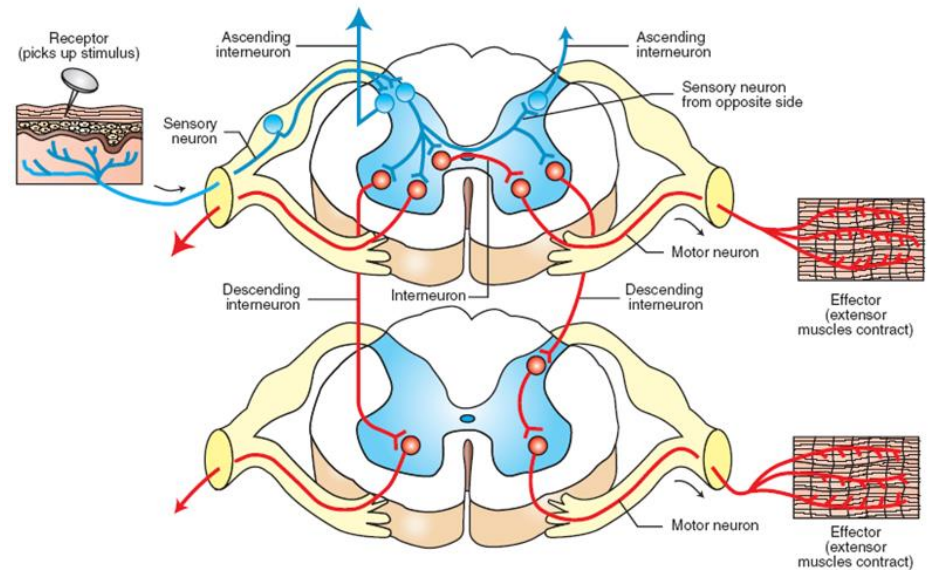
- How does the gastrointestinal system work?
- What kind of cells line the GI tract?
- How does the body use food for energy?



(From Boyd JS, Paterson C, and May AH: Color atlas of clinical anatomy of the dog and cat, ed 2, 2001, Mosby.)

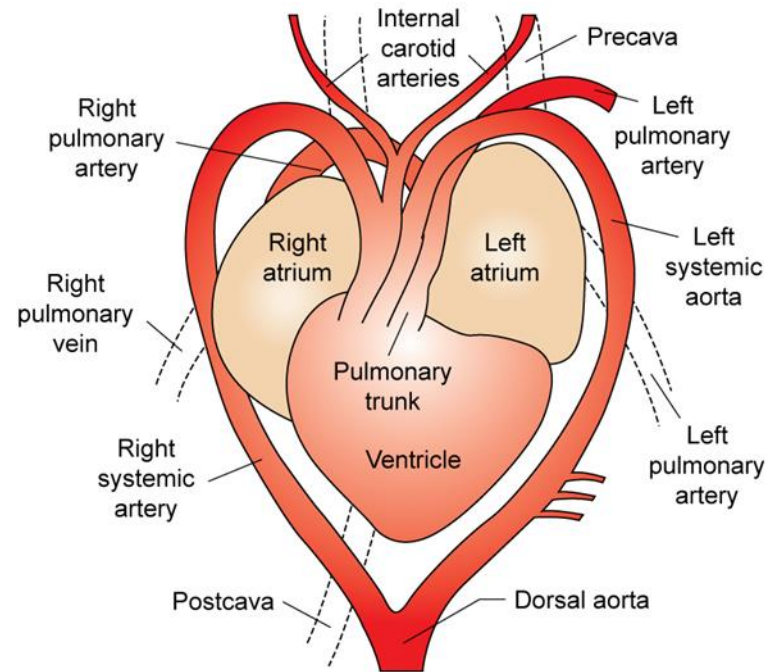
You will learn the anatomy and physiology of all of the body systems

- How is the brain organized?
- How do nerves work?
- How do the senses work?



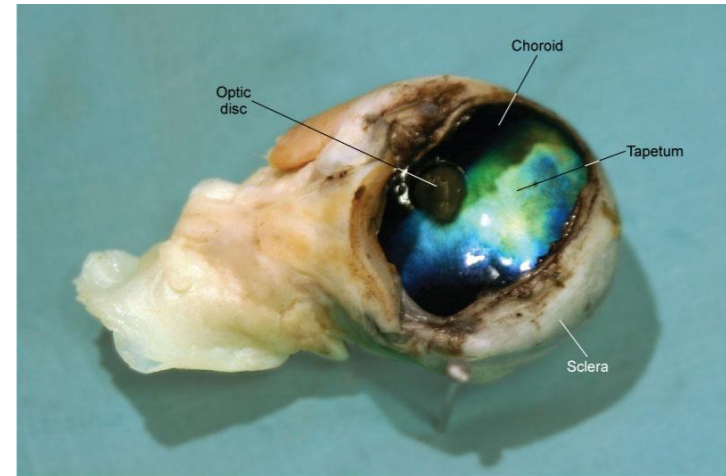
You will learn the anatomy and physiology of all of the body systems

- What's different and important about Avian and Reptilian physiology?

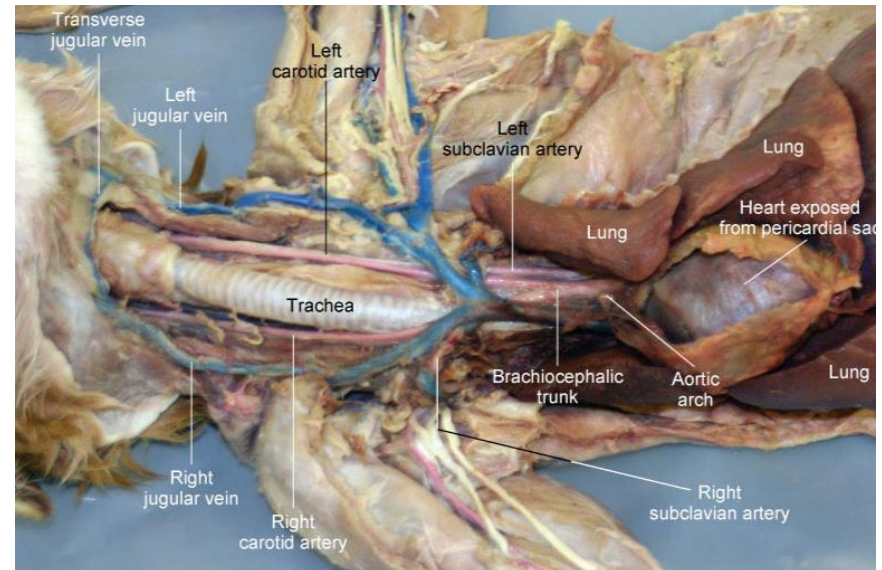


And that's not all!

- In lab you will use skeletons, preserved cats, fresh organs and fresh animal cadavers to learn the anatomy of all of these body systems.



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Medical Terminology

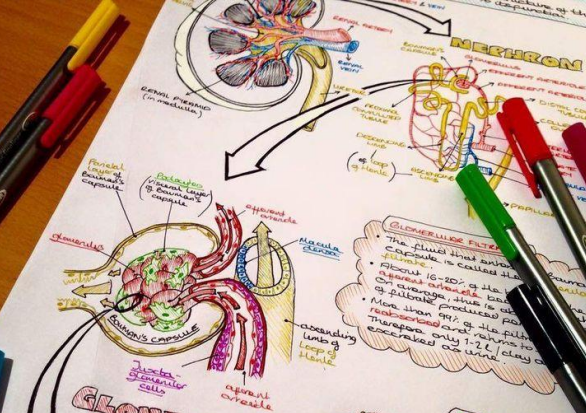
- What does *Osteochondrosis dissecans* mean? Sound like Greek?
- Nope, it's Latin! Latin is the common language of science and medicine.
- You will learn hundreds of Latin terms. What they mean, how to spell them, how to say them, how to use them.

Which one of these terms describes
neutering?

1. *Myectomy*
2. *Orchidectomy*
3. *Chondromalacia*
4. *Aponeurosis*
5. *Pyrexia*

LEARN YOUR SURGICAL TERMS

- TOMY = the surgeon cut something
- ECTOMY = the surgeon cut something out
- OSTOMY = the surgeon made an opening
- PLASTY = the surgeon changed the shape of something
- PEXY = the surgeon moved the organ to the right place
- RRAPHY = the surgeon sewed something up
- DESIS = the surgeon made two things stick together



Types of Pancreatitis

Pancreatitis can range from acute to severe

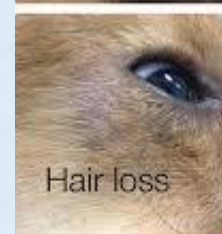
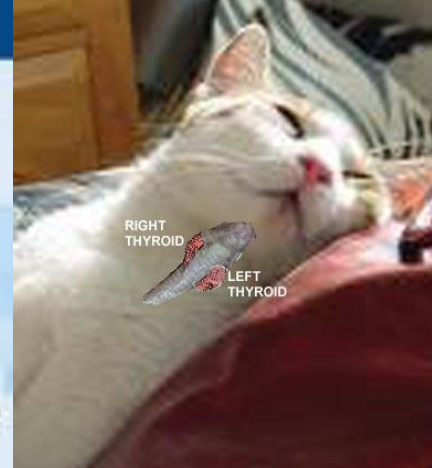
Acute Pancreatitis

- ✓ Symptoms include pain and a bloated or a distended abdomen
- ✓ Your dog may show difficulty in sitting down

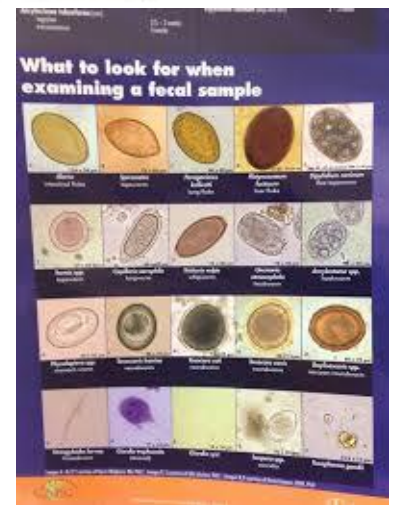


Severe Pancreatitis

- ✓ Your dog will experience more serious symptoms such as disseminated intravascular coagulation (DIC)
- ✓ DIC causes small hemorrhages and lethargy



THEN COMES THE SECOND SEMESTER!





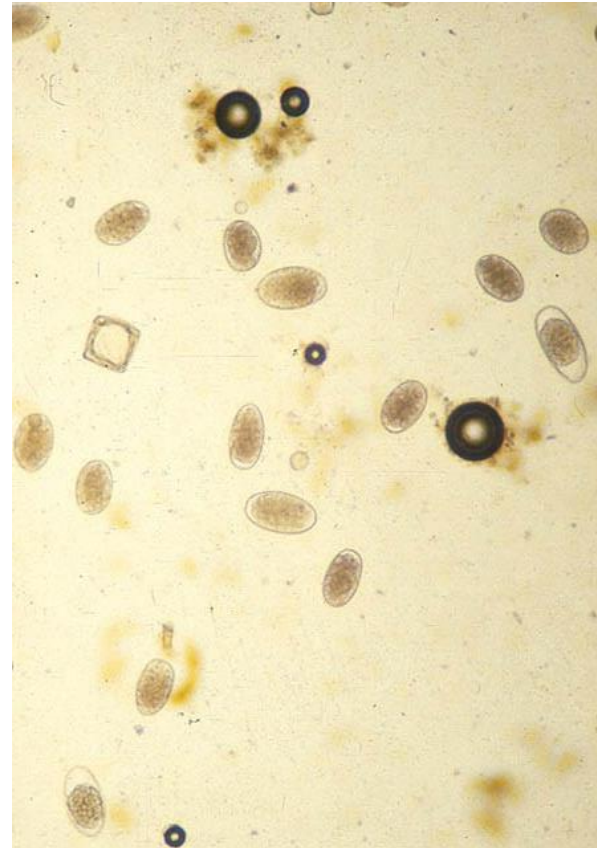
AND PARASITOLOGY!

Where you will learn. . .

- All about 100's of parasites we see in practice.
- You will learn the nematode, platyhelminth, protozoan and arthropod parasites of the all of the animals we commonly treat.
- You will learn the Latin names, the life cycles, the etiology (how animals become infected), diagnosis and treatment of all of the common parasites.

Where you will learn. . .

- In lab you will perform and read many fecal tests
- You will learn how to run heartworms tests.
- You will learn how to recognize and test for all the parasites we learn about in class.

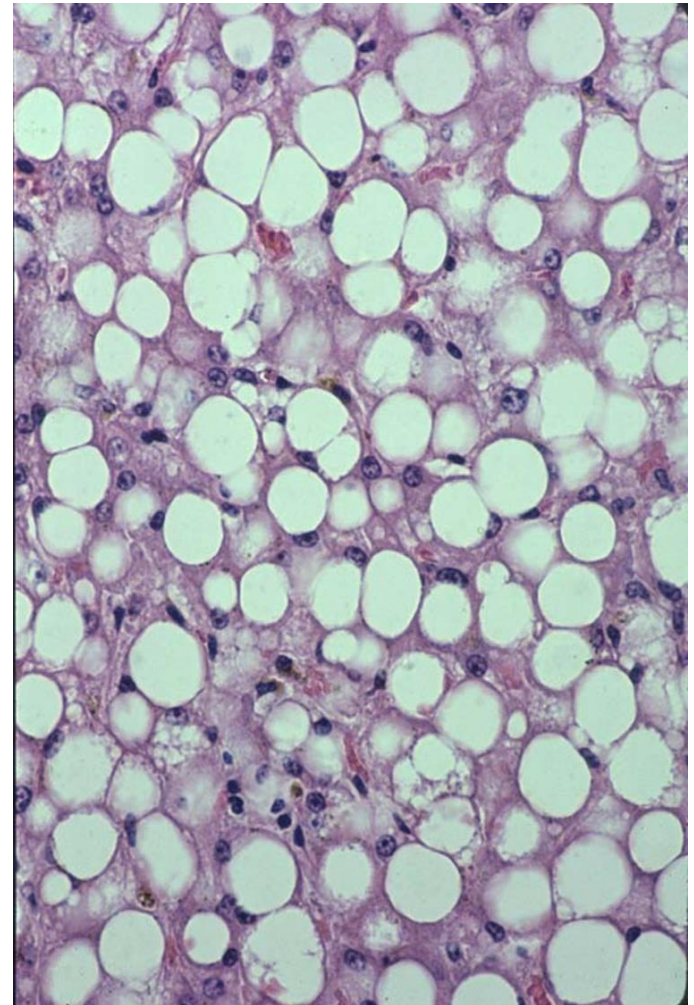


The Latin name of common tapeworm
of dogs and cats is:

1. *Oesophagostomum
dentatum*
2. *Bunostomum
phlebotomum*
3. *Dipylidium caninum*
4. *Anoplocephala
magna*

Plus you will start learning about disease processes.

- In the first semester of Diseases you will learn about how the body gets sick.
- What happens to the cells, tissues and bodies during illness?
- How does disease spread?
- What are bacteria, viruses and fungi?
- How does the immune system work?



In the second semester of Diseases, in the fall of you second year. . .

- you will learn the common diseases of the species we see in practice
- how they are spread
- what symptoms they cause
- how they are diagnosed
- how they are treated
- and how they can be prevented.



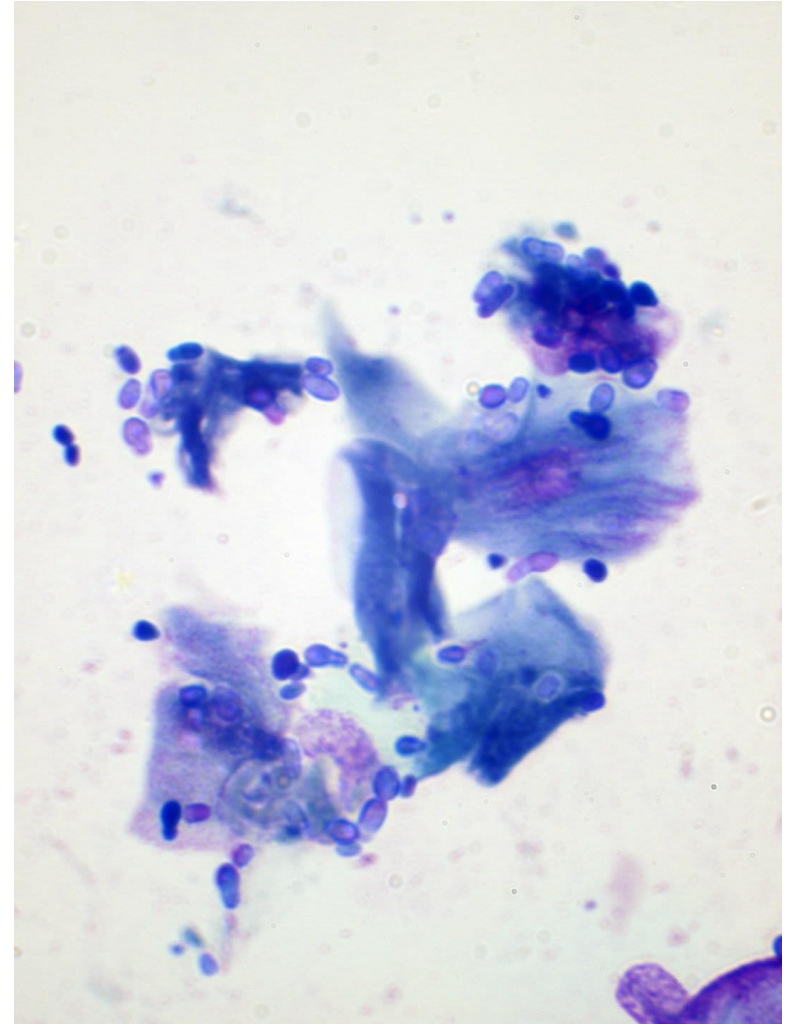
You will also begin learning Laboratory Techniques.

- During 3 semesters of Laboratory Techniques you will learn how to take, prepare and read blood samples and urine samples.
- You will learn how to blood type and how to give blood transfusions.



You will also begin learning Laboratory Techniques.

- You will learn to collect samples, prepare them and identify the cells on cytology
- You will learn to collect, grow and identify bacteria.
- You will learn how to handle tissue biopsies and how to perform a necropsy.



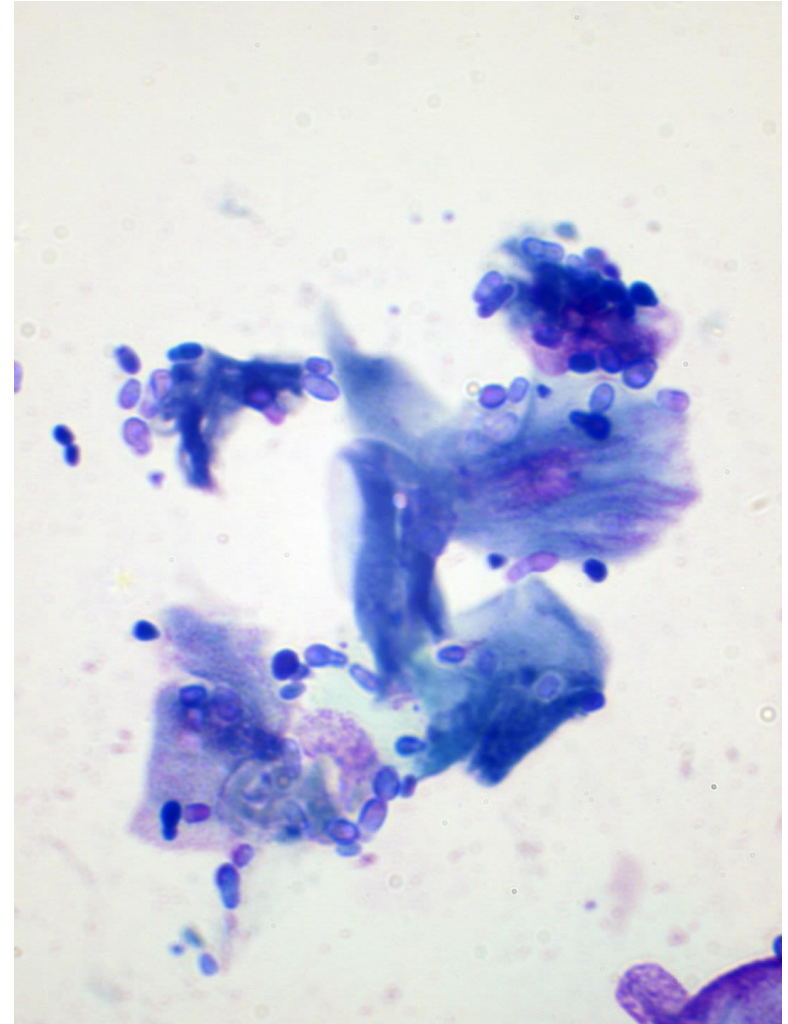
You will also begin learning Laboratory Techniques.

- During 3 semesters of Laboratory Techniques you will learn how to take, prepare and read blood samples and urine samples.
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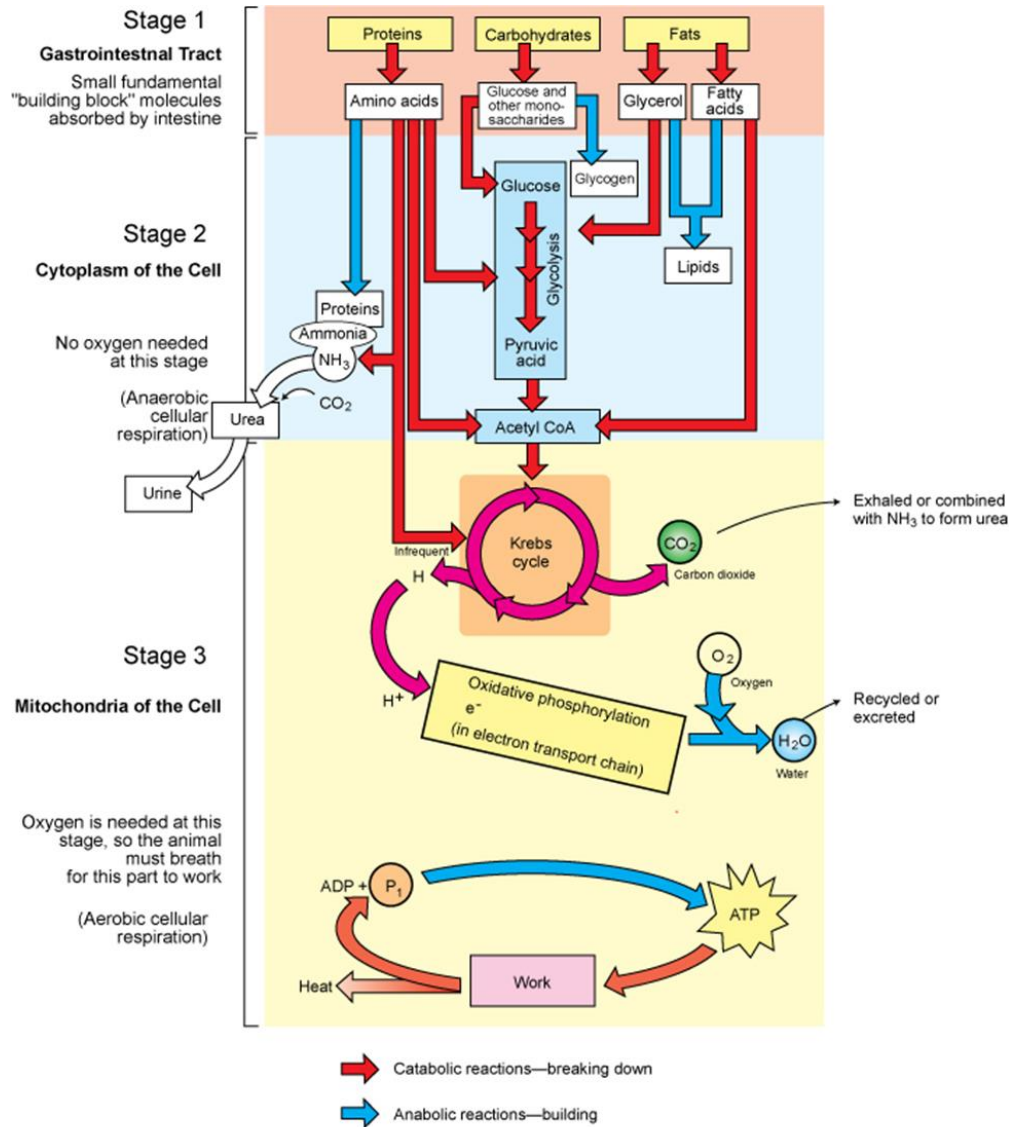
Who is Hungry? . . .

- Nutrition! Nutrition for all the animals we commonly see in practice from fish and rodents to horses and cows.



Nutrition!

- How is food digested?
How does the cell break it down for energy? What nutrients are essential?

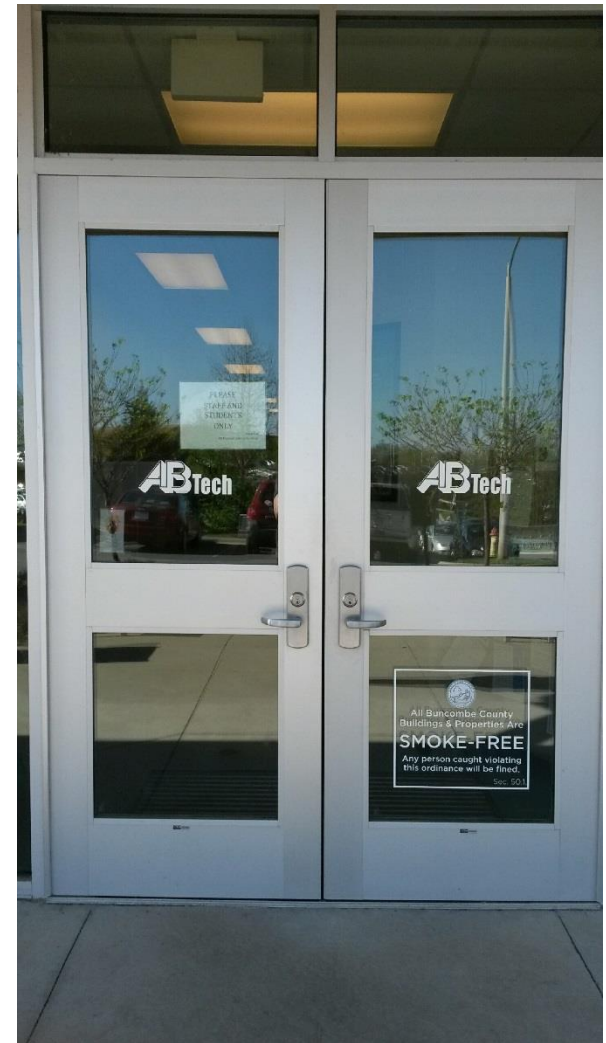


Nutrition!

- How do we feed for the different life stages and life styles?
- How can we help treat disease with nutrition?
- How do we feed hospitalized patients who are not eating on their own?

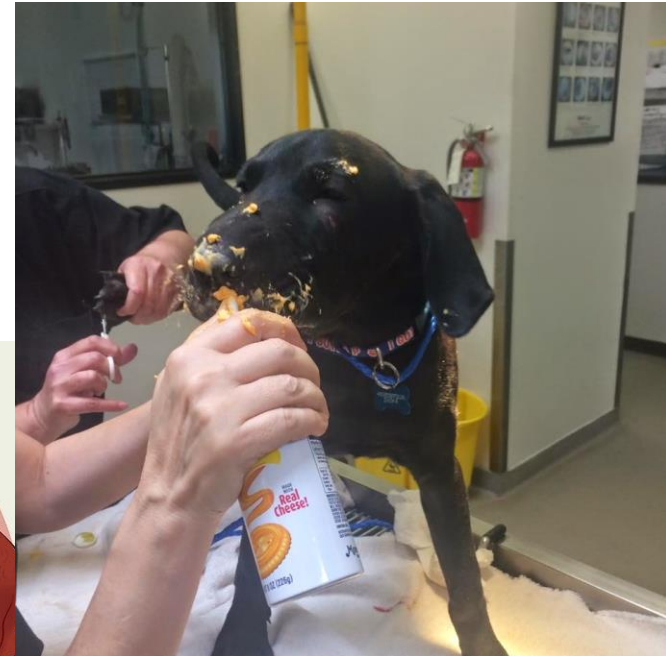


In your first summer
you will begin working
in the clinic

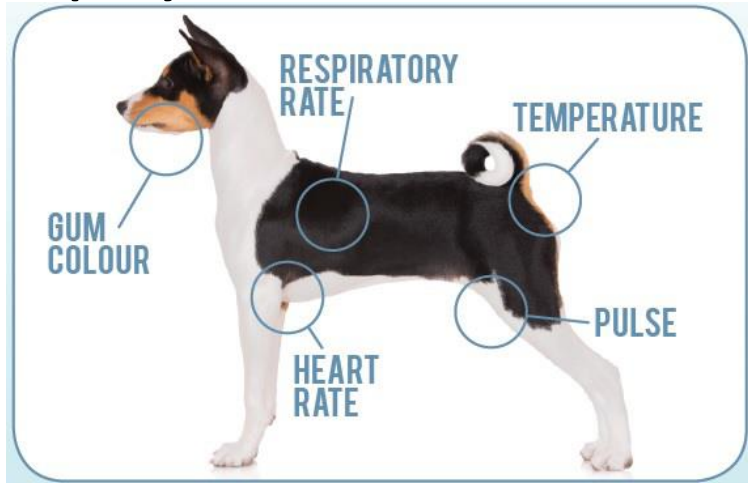


Clinical Practices begins in the 3rd semester.

- In the first semester of Clinical Practices you will learn careful, safe and effective methods for restraining small animals



- You will learn how to gather all the necessary physical data from common small animals.



- You will learn how to draw blood and give injections.

YOU WILL WORK WITH ALL KINDS OF ANIMALS



From some of the smallest. . .



To some of the largest. . .



Some of the sweetest. . .



To some of the most Fearful . . .

DOGGIE LANGUAGE

starring Doogie the Boston Terrier



ALERT



SUSPICIOUS



ANXIOUS



THREATENED



ANGRY



"PEACE"
look away/threat turn



STRESSED
yawn



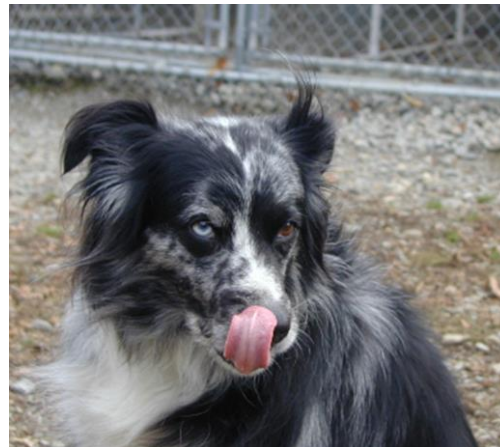
STRESSED
look left



"PEACE"
lift ground



"RESPECT"
turn & walk away



In your second year

- Besides continuing your education in Diseases and Lab Techniques you enter into an intense two semesters dedicated to advancing your skills in Clinical Practices!

Clinical Practices

- In clinical practices you will learn:
 - IV Catheterization
 - Venipuncture
 - Intubation
 - Fluid Therapy and Administration
 - Anesthesia Machine
 - Anesthesia Monitoring
 - Surgical Instrumentation
 - Surgical Assistance
 - Sterile Technique
 - Patient Record Keeping
 - Radiography

Clinical Practices

- Then the **next month** we start utilizing all your knowledge and apply in a real world situation...
- From September to April of last year, we saw 702 animals total... for exams, treatments and radiographs
- We completed 159 surgical procedures and dental cleanings

Intubation

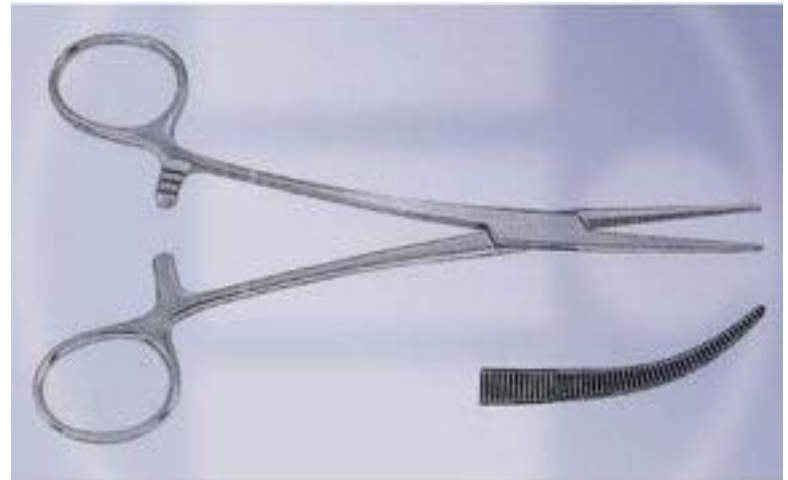
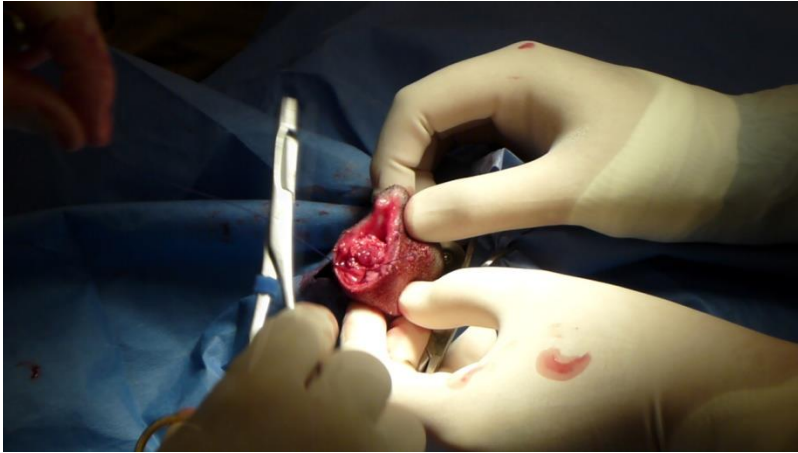
- <https://www.atdove.org/video/canine-endotracheal-intubation>



Math

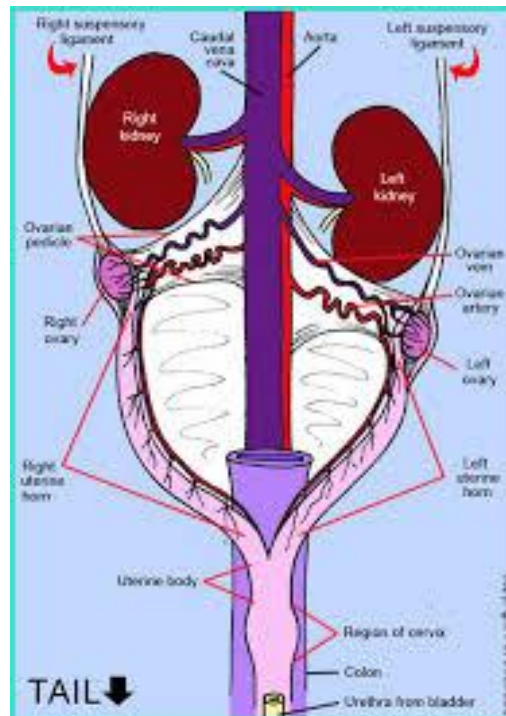
- You will be able to figure math problems like this...
- A 30 kg Doberman pinscher is in congestive heart failure secondary to Dilated Cardiomyopathy. To improve cardiac output, the doctor orders a 10 μg (micrograms)/kg/min of dobutamine. Use a 250 cc bag of fluids and a rate of 15 cc/hr. The concentration of dobutamine is 12.5 mg/ml. How many ccs of dobutamine would you add to the bag of fluids?

Surgery



Surgery

- <https://www.aspcapro.org/resource/spayneuter-surgery-techniques>



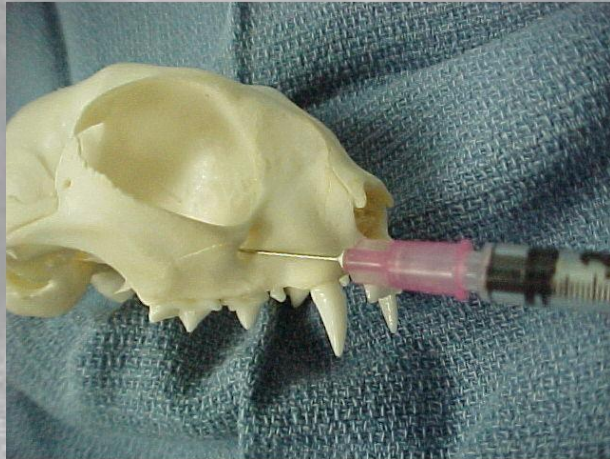
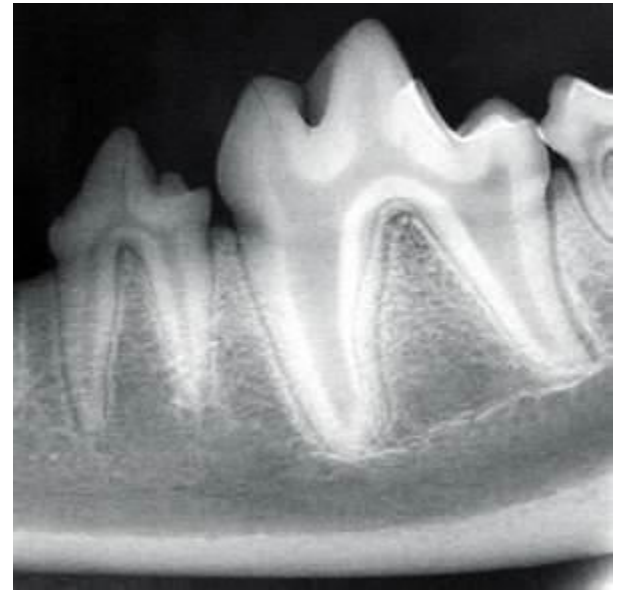
Anesthesia Monitoring



Clinical Practices

- And then in **spring semester** we really get down to business
- **Lab Rotations:**
- Groups of 4 students
- Dentistry/Anesthesia Group
- Surgery/ Anesthesia Group
- Lab/OP Group
- You will each go through one rotation for 4 weeks then switch
- You will have specific assignments for each week and expected to be prepared for class
- You will present “Case Studies” as well as “Problems of the Week”

Dentistry



Dentistry

<https://www.youtube.com/watch?v=vtOV-XmicS8>

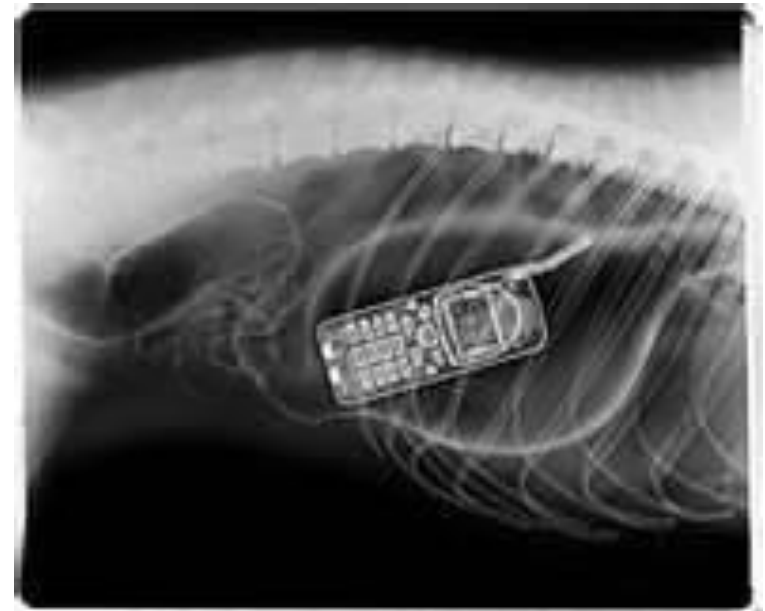


Before



After

Radiography

[illegible]

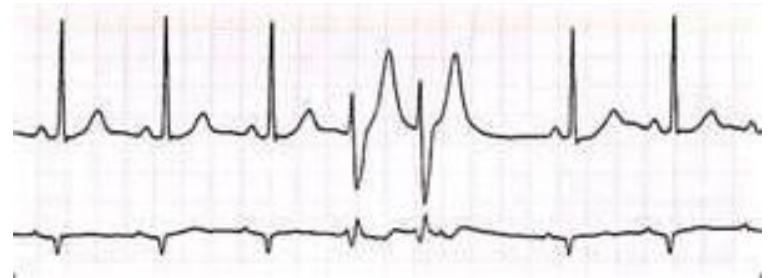
What is the name of this piece of surgical equipment?

1. Criele hemostat
2. Balfour retractor
3. Peden applicator
4. Bone jack



You are monitoring an anesthesia patient and you notice the ECG looks like this. What do you do?

1. Remain unconcerned because this is normal.
2. Give lidocaine because this is a VPC pattern
3. Use the defibrillator because this is ventricular tachycardia
4. Give atropine because this is bradycardia
5. Give epinephrine because this is asystole



What is the lowest blood pressure you would want to see in an animal under anesthesia?

1. 100 mmHg
2. 90 mmHg
3. 80 mmHg
4. 70 mmHg
5. 60 mmHg

How much IV fluids does a puppy with Parvo virus need if it is 5 kg, 7% dehydrated and has on going loss of vomiting and diarrhea that accumulate to 125 ml?

1. 100 ml/hr
2. 82 ml/hr
3. 65 ml/hr
4. 32 ml/hr
5. 10 mlhr

Clinical Practices

- So by the time you complete this program in veterinary technology you will have comparable completed training in the following human fields
 - Medical Assisting
 - Dental Hygiene
 - Radiography Technology
 - Medical Lab Technology
 - Phlebotomy
 - Surgical Technology
 - Nursing
 - Pharmacology Assisting
 - As a Veterinary Technician you are a “Jack of all Trades”

And as if that weren't enough. . .

- There's Pharmacology.
- There are hundreds of medications we use everyday in practice. Everything from the anesthetics you will use in Clinical Practices to treatments for all the medical conditions we see in practice. All of the antibiotics that might be called for and all of the parasite medications you will be sending home with clients everyday.

Pharmacology

- In practice, you are the person who most often prepares medication to be given in the clinic or to be dispensed to the client.
- You are the ones who most often give medications to hospitalized patients
- You are the ones who teach clients how to give medications.



Pharmacology

- Because of this, you will need learn important facts about all of these medications.
- What do we use different drugs for?
- What are common side effects?
- What are reasons for a drug NOT to be used in a particular animal?
- How do we accurately dose, draw up or even dilute a medication for administration?
- How do we recognize a serious adverse reaction to a medication?
- You will need to know this and much more to safely administer or dispense medications to patients!

Large Animal CP

- In lecture you will learn all about large animal medicine. 5 different species to be exact! What are the normal and abnormal physical exam findings? How do we perform common procedures?



What's a normal heart rate for a horse?

1. 15-24 bpm
2. 28-44 bpm
3. 50-68 bpm
4. 77-101 bpm
5. 100-115 bpm



Large Animal CP

- In clinics you will visit farms with a large animal veterinarian where you will learn all about large animal restraint, examination, venipuncture, surgery and medicine.

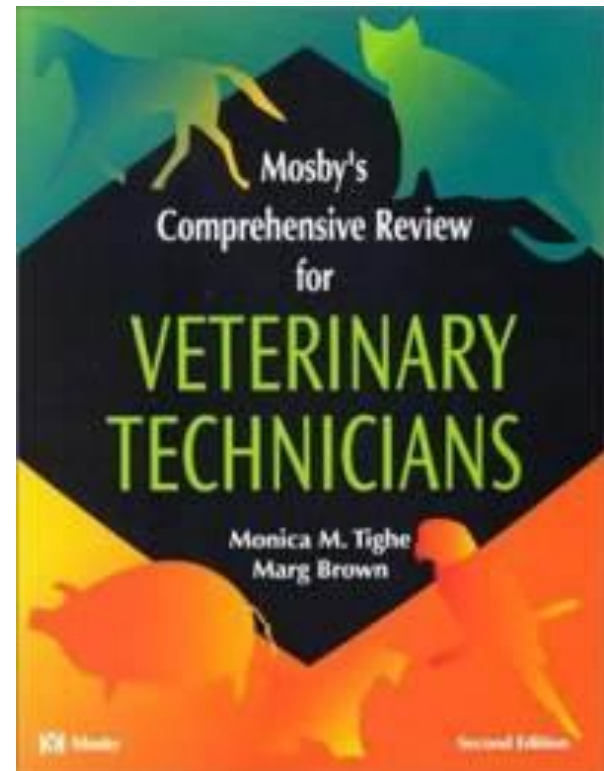


And then finally. . .

- After all those hours in the class rooms, labs and clinic, its Co-op time.
- During your second summer, your last semester, you will work in a clinic as an externship to reinforce what you have learned and give you experience in a real life practical setting.

Then you are almost there. . .

- All of this qualifies you to study for and take the National and State Board exams to become Registered as Veterinary Technician.



Why should we be licensed, you may ask?

- *You* will be *responsible* for the life and well being of you patients.
- If *you* make a mistake you can seriously affect or even end the life of an animal.
- Imagine your own animal going into a veterinary clinic. How good do you want the person who is going to treat your animal to be?
- That's how good we expect you to be.
- Like any licensed health care professional, you are *liable* for patients under your care.



AS AN RVT YOU WILL BE QUALIFIED TO PARTICIPATE IN SO MANY WAYS IN VETERINARY PRACTICE.

In Practice

- You will be expected to participate in all aspects of practice
- You will be a trusted confidant, educator and helper to your clients.
- You will be a sometimes scary but often loved caregiver to your patients
- You will be an essential team member to your colleagues.

You will practice under all sorts of conditions. . .



Helping treat big problems. . .



And small ones. . .



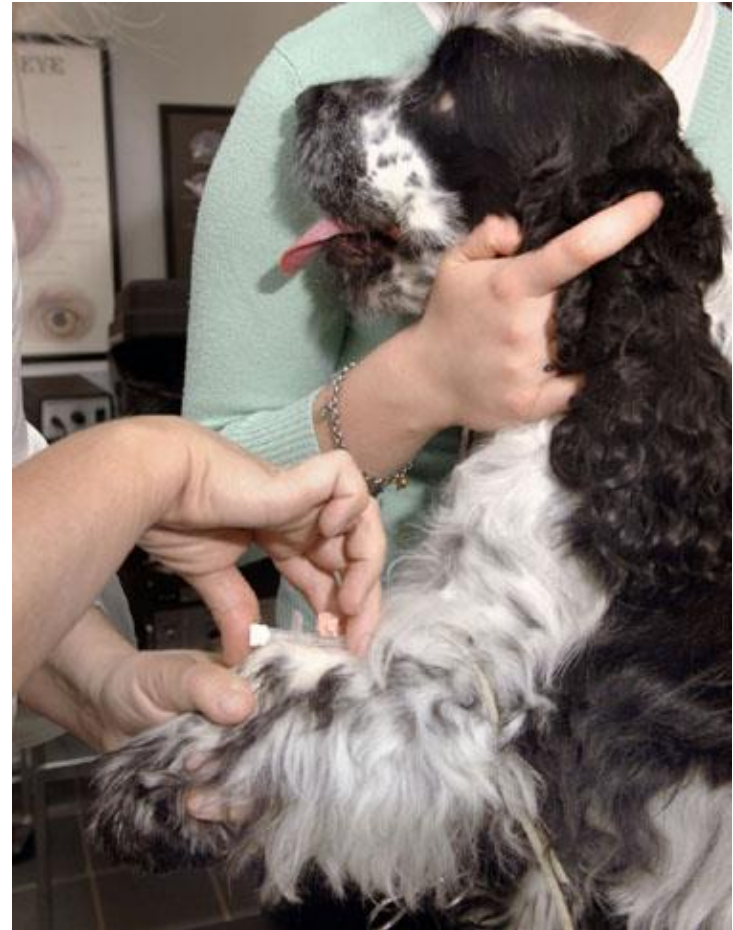
You will travel through the lives of your clients and patients, from the first day you meet. .



Through all the trials and tribulations
of the animal's life. . .



Often, to the last day your client spends with their beloved pet



And in the end. . .

- You will find, like all of us have, that the practice of veterinary medicine will take you places you never thought possible.
- You have chosen a career that never stops challenging you.
- You will never stop learning.

And there's a good chance. . .

- You will be as tired as you have ever been
- You will be as happy as you have ever been
- You will be as sad as you have ever been
- You might even be as angry as you have ever been

And at the end of the day, if this career is right for you, you will be as satisfied with life as you have ever been





