



ANIMAL HEALTH TECHNOLOGY
DISTANCE EDUCATION PROGRAM (TRU AHTDE PROGRAM)
INFORMATION PACKAGE
(updated October 2018)

PLEASE NOTE THAT APPLICATIONS FOR THIS PROGRAM ARE TO BE MAILED TO TRU ADMISSIONS BY THE APPLICATION DEADLINE OF SEPTEMBER 30TH. (DO NOT SEND TO TRU OPEN LEARNING DISTANCE PROGRAMS)

The student should also obtain a copy of the current TRU calendar from the TRU Registrar which is the reference manual for this information package and which outlines Student Academic Policy. Or, refer to “Admissions and Registration” on the TRU website www.tru.ca

This program is a full-time program and qualifies for Canadian Student Loans.

Contact your local post-secondary Canadian Student Loans Office for an application package.

Contact:

ahtprograms@tru.ca telephone 250-852-7170 or fax 250-828-5194

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TRU AHTDE Admissions & Registration

admissions@tru.ca

TRU AHTDE website: www.tru.ca/science/programs/aht/disted

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HISTORY OF THE PROGRAM

Thompson Rivers University Animal Health Technology program began in 1981. The program is two years in length and graduates up to 24 students per year. Our students are mainly British Columbia residents but they have also come from all over Canada. We currently receive approximately 100 applications per year for the 24 available positions. The program has been very successful and its graduates consistently score in the top 10% of the Veterinary Technician National Exam (VTNE) which is written by students from over 100 Veterinary Technician training institutions in North America.

It became apparent that there was a need for a parallel program which trains Animal Health Technologists using Distance Education methods. The prospective students for this program are very interested in becoming Animal Health Technologists/Veterinary Technicians (AHT/VT), have the ability and educational experience to be successful in the program and are often already working in a veterinary clinic or related position. The main reason that these prospective students have not applied to our on campus program before is that they are unable to relocate to Kamloops for two years because of many factors including family duties, work obligations and the expense of relocating. Our survey of British Columbia Veterinary Clinics indicated that the veterinary community is very supportive of an alternative education method for their employees especially if it means that the employee can continue working while upgrading their technical skills.

With this demand for alternative AHT/VT education in mind, we began researching the establishment of the TRU Animal Health Technology Distance Education program (TRU AHTDE program). We reviewed the following successful American Veterinary Medical Association accredited programs:

St. Petersburg Junior College – Florida

Cedar Valley College (Dallas County Community College District, Texas) – the American Animal Hospital Association sponsored program

Purdue University - Indiana

Blue Ridge Community College - Virginia

The decision was made by TRU in January of 2004 to offer the AHTDE program beginning in January of 2005. The Canadian Veterinary Medical Association currently views the AHTDE program as part of our on campus AHT program. Our AHTDE program has accreditation status. The AHTDE program was also accredited by the Ontario Association of Veterinary Technicians (OAVT) in 2008.

The information contained in this information package is as current as we can possibly make it. However, if you have any questions please do not hesitate to contact the TRU AHTDE program at ahtprograms@tru.ca or call 250-852-7170

Is This the Right Program for You?

Technology has allowed educators to develop distance courses that are equal to on campus courses in many disciplines. However, the student must realize that training by distance does not suit all learning styles and that many individuals do not do well learning in this manner. The distance student needs to be someone who does not mind working alone and who is highly organized and self-motivated. In our AHTDE program we require that the student be working in a veterinary clinic (small or mixed practice) during their studies so there are opportunities for discussion and guidance but it is not the same as learning in a classroom environment surrounded by your peers. In all university courses, timelines and “keeping up with your studies” are important but they are even more so in distance education courses. Many things will arise in your day, week or month that has the potential of keeping you from your course work

Another myth of distance education courses is that they are easier and are less of an academic challenge. All of the Veterinary Technician Distance Education programs listed above indicate that this is definitely not the case. As you will see in our information on the program, the student will take two courses per 12 week semester for three semesters per year for three years to complete the program. This course work is in addition to working (paid employment) a minimum of 20 hours per week in a veterinary clinic plus, in many cases significant personal responsibilities such as raising a family. Dr. Guy Hancock of St. Petersburg Junior College’s Veterinary Technician Distance Training program (the longest running and most successful program in North America) states that their distance students perform 10% better on the VTNE than the students trained in their on campus program. He feels that the successful distance student is highly motivated and self-disciplined.

Distance Education is not substantially less expensive than on campus training. Programs have to be developed, administered and taught and these are all expenses covered by the student fees. There are savings, however, in areas such as:

- the cost of and time involved in relocating to a training center
- loss of work income
- in some cases, the cost of maintaining two residences
- the emotional cost of being separated from family and friends
- exemption from on-campus student fees, lab levies, parking fees etc.

There are several excellent books and manuals written on Distance Education and the Distance Education Student. Most post-secondary institutions offer Distance Programs and have counselors knowledgeable about the skills needed to be a successful student. Please do some research before you commit to a very interesting but demanding program.

Please note: We have found in order to be successful in this program, the student has already been working in a veterinary clinic for an extended period of at least 6 months. It is crucial that you have the support of your clinic and co-workers during your time in this program. Starting our program and a new job does not allow time to build up a rapport with your co-workers which could lead to conflicts and a lack of cooperation.

SUMMARY OF THE PROGRAM

The program is designed to train individuals for employment as professionals in the field of veterinary medicine. The Animal Health Technologist works under the supervision of veterinarians and veterinary scientists in a variety of areas including diagnostic testing, diagnostic imaging, dentistry, medical procedures, office protocol, animal nursing, anesthesia and surgical assistance. Employment opportunities can be found with private veterinary practices, medical research centers, zoological parks, government laboratories, animal shelters, wildlife rehabilitation centers, pharmaceutical companies, teaching institutions and commercial farms. Graduates can expect a varied and satisfying career.

The AHTDE program is intended to allow qualified individuals to obtain the theoretical portion of their training by distance education using a combination of electronic and classical hard copy technologies. The clinical, “hands on” training that is vitally important to a competent Registered Veterinary Technologist (RVT) and will be provided at their place of work. The TRU AHTDE program is available to students anywhere in Canada.

This program is designed to be completed in a **minimum of three years**. There are three semesters per year of twelve weeks duration each. During each semester the students take two courses. There is also the opportunity for graduate AHT/RVT’s to take specific courses for Continuing Education credits.

The student may opt for a “one time” delay in enrolling in the next semester of the program but they must complete the entire program within four years of initial enrollment.

Successful completion of year three of the AHTDE program will result in the student being awarded an **Animal Health Technologist Diploma**. The student must successfully challenge the Veterinary Technician National Board Exam (VTNE) and apply for registration with their provincial AHT/RVT Association to be recognized as a **Registered Veterinary Technologist (RVT)**.

EDUCATIONAL REQUIREMENTS

- B.C. Grade 12 (or equivalent*), C minimum
- B.C. Principles of Math 11 (prior to Jan 2013) or Foundations of Math 11 (after Jan 2013) (or equivalent*), C+ minimum
- B.C. Chemistry 11 (or equivalent*), C+ minimum
- B.C. Biology 11 (or equivalent*), C+ minimum
- B.C. grade 12 Biology, Chemistry or Physics (or equivalent), C+ minimum (Biology 12 or BIOL 060 (or equivalent) is recommended)
- B.C. English 12/English 12 First Peoples (or equivalent) C+ or LPI Level 3
- **Any pre-requisite courses in progress MUST be completed with an official transcript submitted before December 1st of the year prior to the January start date.**

Mature Student Status does not apply

GENERAL REQUIREMENTS

- Canadian citizenship or landed immigrant status
- Evidence of computer skills. The student must be familiar with basic word processing, email management (including posting attachments) and internet navigation. The student must also be familiar with downloading and uploading videos, still images and documents and have the means to be able to do so. Exposure to a veterinary office management software program would be beneficial.
- A signed Clinic Affiliation Form which includes the signed Clinic Mentor Letter (see Appendix #2) verifying:
 - i. that the student is a paid employee of the Veterinary Clinic and that they will be working a minimum of 20 hours per week when they are enrolled in the AHTDE program courses (volunteering does not qualify)
 - ii. that a DVM licensed to practice in Canada or RVT (with a minimum of 2 years post-grad clinical experience) has agreed to be the “Clinical Mentor” for the student during the time they are enrolled in AHTDE program courses.
 - iii. that the clinic meets or exceeds the College of Veterinarians of British Columbia (CVBC) Practice Standards

https://cvbc.ca/Files/Bylaws-Policies/Appendix_B_-_Facility_Practice_Standards.pdf

- 2 reference forms – at least one of these to be from your potential Clinical Mentor, indicating under Additional Comments:
 - a) their support of you taking this program
 - b) time you have worked with this clinic
 - c) that you are employed a minimum of 20 hours per week (volunteering does not apply)

- A signed Health and Safety Acknowledgement form
- A signed Student Awareness document (including Pregnancy Policy, Forum Etiquette, Academic Integrity and Expectations).

It is highly recommended that the applicant be employed with the clinic for a minimum of 6 months in order to establish a stable “working relationship” before entering the AHTDE program.

The TRU AHTDE program reserves the right to limit class sizes. In the event that applications are over and above the program’s capacity, applicants will be selected on a first come, first served basis (based on complete application packages). **The program begins each January and the class size will be limited to 30 students.**

Application for entry into the program must be received by September 30 of the year preceding the January start date.

Applicants will be notified of their status (accepted, wait list or not accepted) two months before the start of the program year (January of each year). Those who are accepted into the program will be required to pay their semester fees within four weeks of official notice of acceptance.

Students must pay by semester (a maximum of two courses). Please consult Fees and Expenses. Semester fees must be paid four weeks before the commencement of the next semester the student intends to enroll in.

It is a requirement of the AHTDE program that the student belongs to their provincial AHT/VT Association. Proof of membership by the Animal Health Technology Program may be requested for each year of the three year duration.

Applicants have the right to appeal admission decisions. Appeal procedures are described in the Academic Information of the TRU Calendar.

- Consult the Admissions Office for course equivalencies from other educational institutions in Canada.

STUDENT FEES AND EXPENSES

Fees for the TRU AHTDE program are \$270.61 per credit. This is an average of six invoiced credits per semester for a total of \$1623.64 per semester.

Additional and Ancillary Fees incurred by on campus AHT students do not apply to AHTDE students (Student Society Fees etc.)

Texts, course notes and supplies will average approximately \$275 per semester. (This is an estimate only – *prices may change without notice*). The student is required to purchase a video camera (as video assignments are required throughout the 3 years of the program). As all videos need to be submitted in a consistent format, you are required to purchase a camera that will accommodate this (must record or be downloadable to MPEG 4 format). Please contact the program Coordinator for specifics.

All expenses incurred by the student during the duration of this program are the responsibility of the student. This includes all work place expenses, travel to clinical instructional sites, computer and internet costs, invigilation costs, video costs, mailing and phone charges, etc.

This program qualifies for Canadian Student Loan. Please contact the TRU Financial Aid and Awards office at <http://www.tru.ca/awards/>

Please refer to the TRU calendar for Refund policies.

PROGRAM POLICIES

This is not a continuous entry program.

The program year begins in January. **Any student that temporarily opts out of continuing on with the program must wait until the next yearly enrollment to recommence their studies. The program however, MUST BE COMPLETED WITHIN 4 YEARS. The student must be aware that re-entry into the program is not guaranteed the following year and is dependent on class sizes and instructor availability.**

A student who has previously failed in a health-related program and who subsequently applies for admission to the same program or to another health-related program will be regarded as a repeating student, unless he/she can show cause for being treated as a new student.

- A minimum of C in all courses and a cumulative GPA of 2.50 are required for promotion between semesters and for graduation in the program.
- **One failure or withdrawal from a course will result in the student being required to withdraw from the program.**
- A student can reapply to the program after a period of one year. The student will be expected to retake the course in which the failure occurred.

A student who receives a failing grade in a course for failure to meet objectives related to essential skills assignments, professional responsibility, professional accountability or patient safety may be refused re-admission to the program (or another health related program) at the recommendation of the Program Chairperson and the approval of the Divisional Dean.

PROGRAM REQUIREMENTS

The Veterinary Clinic at which the student is employed must meet certain standards (our benchmark will be the College of Veterinarians of British Columbia Practice Standards document

[https://cvbc.ca/Files/Bylaws-Policies/Appendix B - Facility Practice Standards.pdf](https://cvbc.ca/Files/Bylaws-Policies/Appendix_B_-_Facility_Practice_Standards.pdf)

to be designated as a Clinic Affiliation Site (CAS).

The student must be employed by the CAS for a minimum of twenty hours per week as a veterinary assistant for the duration of the semester in which the student is currently enrolled. **Volunteering at a facility does not qualify entry into this program. Please note that the student's course work is not included in the minimum 20 hours per week.** This Distance Program will not be effective unless the student is employed in a modern, progressive veterinary clinic for the duration of the course in which they are currently enrolled. Veterinary Technicians are expected to not only understand their field but also be able to perform the tasks that they have learned. This can only be accomplished by physically performing the tasks and repeating them to attain proficiency.

The CAS must provide a TRU AHTDE program approved "Clinical Mentor" (either a DVM licensed to practice in Canada or RVT with minimum 2 years post-grad clinical experience) for the student. The Clinical Mentor must be identified in the Clinic Affiliation Form.

The TRU AHTDE Program must have received a Clinic Affiliation Form (Appendix #2) with the student application. This agreement details the responsibilities of the CAS and the CM in regards to student mentoring. In addition, it will also verify that the CAS meets or exceeds the CVBC Practice Standards requirement.

This agreement will be automatically renewed annually for the duration of the student's participation in the program unless there has been a change in the student's circumstances.

The theoretical courses will follow a traditional format of quizzes, assignments, a midterm and a final exam. Each course will have essential skills assignments that the student must perform to the satisfaction of the Clinical Mentor and the TRU AHTDE Course Instructor. The Clinical Mentor may be asked to sign off on some student assignments. The student, depending on the course and the assignment, will be required from time to time to submit videos which demonstrate the student performing a skill. Other submissions may include written work, laboratory materials such as blood films, parasite collections, radiographs and other student generated materials.

Qualifications for the Clinic Affiliation Site

- AAHA or CVMA approved full service clinic
- **Small (dog & cat) animal or mixed animal practice**
- **Employ** student for a minimum of 20 hrs/week throughout the 3 year AHTDE program

Qualifications for Clinical Mentor(s):

- DVM licensed to practice in Canada
or
- RVT with minimum 2 years post graduate clinical experience

Moodle

The AHTDE program will use the Moodle course management program. All courses will have the option of delivering quizzes via Moodle. However, these quizzes are meant as study aids and study incentives rather than for major exams. The total worth of Moodle (or other computer driven) quizzes will not exceed 10% of the course.

Moodle will allow the student to:

- check their course progress in the grade section (students will only be able to view their own marks)
- check for announcements from the instructor and consult the course calendar
- view the course objectives, course outline and course notes
- be reminded of where you should be in the course at what time
- be able to send messages and ask questions of your instructor and classmates
- have supplemental educational materials sent to you such as pictures, video and audio clips, website links etc.
- participate in discussion assignments

Hardware Required to Operate Moodle:

Window users must have:

- Pentium IV or higher microprocessor, or equivalent
- Minimum 1 Gig of RAM (memory)
- High Speed Internet connection

Macintosh users must have:

- G4 or higher
- Minimum 1Gig of RAM (memory)
- Mac OS X or higher

Software Required to Operate Moodle:

- Course is rich in video, so you will need “sound enabled”
- Word-processing program – compatibility with Office 2007 or XP
- Adobe Acrobat Reader (current version)
- Email account that supports file attachments
- Any current JAVA – enabled web browser (ie. the latest version of Firefox, Chrome or Safari)

How to access Moodle:

Go to the TRU website www.tru.ca and then to Moodle (the Moodle link is just under “Students” at the bottom of the main homepage). When you have registered for a particular AHTDE program course, we will register you in Moodle as well. Your Moodle ID is your student number (ex. T0001113) and your password is set as your birthdate (ex. 900609 – this would be a birthdate of June 9, 1990).

COURSE NOTES AND COURSE REQUIRED TEXTS TRU BOOKSTORE

The course notes will be available online through the Moodle courses. You can print them, if you choose. The TRU bookstore is available for related course materials and special orders. They are very experienced in delivering course materials off campus. They can be reached at <http://thebookstore.tru.ca> 250-828-5141.

Costs of books and supplies are the student’s responsibility.

Digital Video Camera:

It is required that the student have access to a digital video camera as many assignments will require that you record a visual demonstration of yourself performing the assigned skill. The recorded material is to be submitted to your course instructor.

As all videos need to be submitted in a consistent format, you are required to purchase a camera that will accommodate this. Your camera needs to be able to record in (or convert to) MPEG 4 format. You also want a camera with a good sound pickup and picture steady when recording.

COURSE DESCRIPTIONS

*NOTE: In all the courses listed below there will be associated clinical assignments that the student must complete to the satisfaction of the Clinical Mentor and the TRU AHTDE Course Instructor before the student receives credit for completion of that particular course.

YEAR ONE

Semester One:

ANHD 1010 – Office Skills (3,0,0)

ANHD 1100– Anatomy and Physiology 1 (3,0,0)

*ANHD 1900 - Veterinary Clinical Studies 1 (5,0,0) (no fee assessed)

Semester Two

ANHD 1120 – Animal Nursing 1 (3,0,0)

ANHD 1130 – Animal Behaviour (3,0,0)

*ANHD 1910 – Veterinary Clinical Studies 2 (5,0,0) (no fee assessed)

Semester Three

ANHD 1110 – Veterinary Parasitology (3,0,0)

ANHD 1210 – Veterinary Microbiology (3,0,0)

*ANHD 1920 – Veterinary Clinical Studies 3 (5,0,0) (no fee assessed)

***NOTE: ANHD 1900, 1910, 1920 (Veterinary Clinical Studies) refers to clinic work (20 hours per week minimum). These are not online course requiring payment or course material.**

YEAR TWO

Semester One

ANHD 2110 –Veterinary Hematology (3,0,0)

ANHD 2150 – Immunology & Animal Diseases (3,0,0)

*ANHD 2900 – Veterinary Clinical Studies 4 (5,0,0) (no fee assessed)

Semester Two

ANHD 2100 – Anatomy and Physiology 2 (3,0,0)

ANHD 2120 – Animal Nursing 2 (3,0,0)

*ANHD 2910 – Veterinary Clinical Studies 5 (5,0,0) (no fee assessed)

Semester Three

ANHD 2130 – Radiology (3,0,0)

ANHD 2140 – Pharmacology & Laboratory Mathematics (3,0,0)

*ANHD 2920 – Veterinary Clinical Studies 6 (5,0,0) (no fee assessed)

***NOTE: ANHD 2900, 2910, 2920 (Veterinary Clinical Studies) refers to clinic work (20 hours per week minimum). These are not online course requiring payment or course material.**

YEAR THREE

Semester One

ANHD 3140 – Anesthesia (3,0,0)

ANHD 3170 – Animal Nursing 3 (3,0,0)

*ANHD 3900 – Veterinary Clinical Studies 7 (5,0,0) (no fee assessed)

Semester Two

ANHD 3110 – Clinical Pathology (3,0,0)

ANHD 3120 – Intensive Care (3,0,0)

*ANHD 3910 – Veterinary Clinical Studies 8 (5,0,0) (no fee assessed)

Semester Three

ANHD 3150 – Laboratory & Exotic Animals (3,0,0)

ANHD 3160 – Large Animal Science (3,0,0)

*ANHD 3920 – Veterinary Clinical Studies 9 (5,0,0) (no fee assessed)

***NOTE: ANHD 3900, 3910, 3920 (Veterinary Clinical Studies) refers to clinic work (20 hours per week minimum). These are not online course requiring payment or course material.**

HOW TO APPLY - See Appendix #1

At the beginning of Year Two, Semester One, you will receive an **Essential Tasks Log Book**. You will be required to complete this and submit it **(by courier)** before December 1st of your graduation year to:

Carol Costache, Program Assistant
Animal Health Technology
Thompson Rivers University
805 TRU Way
Kamloops, BC V2C 0C8

TRU AHTDE PROGRAM CLINICAL MENTOR INFORMATION

1. To qualify as a Clinical Mentor , the individual must:
 - a. Possess a current DVM degree from a CVMA accredited institution and be licensed to practice veterinary medicine in their province or,
 - b. Be a graduate of a CVMA or AVMA accredited program of Animal Health Technology and be licensed as a Registered Animal Health Technologist/Veterinary Technologist (with a minimum of 2 years post-grad clinical experience).
2. All individuals who volunteer their time to act as a Clinical Mentor must be **included in the Clinic Affiliation Form. (see Appendix # 2)** This document must be submitted to the TRU AHTDE program office with the student's application to the program. The accepted Affiliation form will be renewed automatically on an annual basis as long as the student is currently enrolled in the program and there has been no change in the conditions of the agreement.
3. **Duties of the Clinical Mentor:**
 - a. To act as a mentor for the student during their AHT program
 - b. To demonstrate the proper performance of essential skills that the student is required to learn and perform.
 - c. To sign off on essential skills that the student must complete once the Clinical Mentor is satisfied that the student has mastered the skill.
4. The duties of the Clinical Mentor cannot be delegated to other individuals without the prior approval of the Course Instructor. The course instructions sent to the Clinical Mentor will identify the instances (including the signing off of essential skills) where the Clinical Mentor **MUST** monitor the student. The degree of monitoring (direct, indirect, periodic checks etc.) will also be identified.
5. We wish to make this program as student friendly as possible. With this in mind we are asking Clinical Mentors to include the student in the evaluation process. Any evaluations, comments etc. that are sent to the Course Instructor or the Coordinator of the TRU AHTDE program should be discussed with the student first so that the student has an opportunity to contribute to the process.
6. We are also asking the Clinical Mentor to familiarize themselves with the course that the student is taking and to monitor their progress so that they stay on task and on time. It is very easy to fall behind in a distance course and very difficult to catch up. The student is provided with a syllabus, a course outline, a course calendar and Course Instructor contact data (email etc.) which the Clinical Mentor can consult to familiarize themselves with the recommended course progress.
7. **Academic Honesty.** The Clinical Mentor is encouraged to help the student by explaining material, demonstrating techniques, giving opinions on veterinary topics and encouraging them in their studies. However, the students must do the assignments

- themselves. Any instance where student academic dishonesty is proven will result in the student being asked to withdraw from the program.
8. **Examinations.** The Clinical Mentor is not responsible for invigilating midterm and final exams. It is the student's responsibility to arrange an independent testing site acceptable to the AHTDE program (see APPENDIX #3) for midterm and final exams. This could include writing the exam in the presence of an invigilator at a university, community college or other agreed upon institution. Please have the student consult with the Program Assistant for further assistance.
 9. **Clinical Mentor Supervision of Student Assignments.** It is critical that the student become proficient in the skills listed in the course outline. Ensuring that the student achieves proficiency in these skills is the most important function of the Clinical Mentor. The course outline will detail the level of involvement required of the Clinical Mentor for each assignment. We ask that the Clinical Mentor and the student attempt to schedule these supervised sessions during quiet times when interruptions can be kept to a minimum. These sessions are the "real class time".
 10. The Clinical Mentor should attempt to provide a supportive learning experience for the student by using encouragement, positive feedback and timely criticisms. If conflicts arise between the Clinical Mentor and the student that cannot be resolved on a one to one basis, the Course Instructor and the Program Coordinator should be involved to assist in a resolution of the problem.
 11. The Clinical Mentor should feel free to contact the Course Instructor at any time during the course. The critical time for student success is the first two weeks of the course.

CLINIC AFFILIATION SITE (CAS) INFORMATION

Each off campus affiliation site (CAS) must be approved by the TRU AHTDE program and must have submitted a Clinic Affiliation Form (see Appendix # 2). This document will be renewed automatically on an annual basis as long as the student is enrolled in the AHTDE program and the conditions of the agreement have not changed.

Why is this type of program being offered?

- We realize that it is often difficult for a clinic to find and hire Registered Veterinary Technologists
- The work force is shrinking and there will be more competition from many sectors for workers
- We feel that in future, successful businesses will have to be an active participant in the training of their staff and not rely on hiring the finished product
- Our program is geared to the clinic that has a good employee that they would like to take on more skills ultimately leading to that employee becoming an RVT
- Our philosophy is that you are probably already training these employees to do more but are limited by time, resources and legalities
 - We provide the framework for the training and the final accreditation

What is in it for our clinic?

- Staff turn over hurts the bottom line
- Retraining is expensive
- We feel that our program enables you to get the most from a valued employee
 - Increases their job satisfaction
 - Once they have graduated and registered with their provincial AHT or VT association, they can perform a wide variety of duties.
 - Allows the DVM more time to do what they are trained to do - diagnose, perform surgery and prescribe
 - Keeps a valued employee in the practice for a longer period of time
 - It all translates into a more profitable business situation, a more stable workforce, improved standards of care for the animals and a more comfortable workplace environment
 - We have found that the interest and clinical expertise of all the clinic staff increases when they have a student in their midst
- There is no financial compensation from TRU to the clinic. The payoff is in the quality and benefit to your practice of an RVT.

What is expected of myself and my staff if we have a student enrolled in this program?

- You do not have to "handhold" the student:
 - In the Anatomy and Office Skills in the first semester, your input will be minimal. As the student progresses through the program you will be called on to supervise the student more closely:
 - The Animal Nursing courses in first year (second semester), second year (second semester) and third year (first semester) do contain assignments involving live animals. Your presence will be required when a procedure with the potential to cause damage or pain to an animal is being performed (for example, venipuncture in first year, cystocentesis in second year)
 - In third year, the students will be inducing anesthesia, monitoring surgical patients, placing catheters etc. However, we feel that by the time the student reaches this point they will have had a great deal of instruction under their belts and will already be an increasing asset to the clinic and will therefore be worth the extra effort you are putting in to them.
 - For most of the courses, the students will be:
 - Learning vocabulary
 - Identifying parasites
 - Working with microbiology cultures
 - Learning surgical preparation skills
 - Learning common diseases
 - Working on radiology skills and many other tasks that do not require your supervision. They do, however, require your permission if the assignment involves anything to do with your clinic
- Someone in your clinic (a DVM, licensed to practice in Canada or RVT with a minimum 2 years post-grad clinical experience) is required to become the student's Clinical Mentor (CM). There can be more than one CM per clinic and they can change if necessary - we just need to be kept informed. We would prefer if the CM individual stayed fairly constant which helps with continuity but we also understand that life happens!
- The CM is a mentor, they do not prepare and deliver lessons nor do they give exams. We will provide the course content online and the students will write all their midterms and final exams at an independent site such as a local community college. Your clinic will not be involved in this.
- The CM should be aware of the progress of the student and the courses in which they are currently enrolled. You are not expected to have read all the content but you should be aware that the student is taking Parasitology this semester, for example, and you will probably be dealing with some "bug" questions.
- The student is instructed to inform you well in advance of the assignments they are expected to do so there are no surprises

- The CM will be the person that the student comes to if they have a question or do not understand a concept. The CM will directly supervise procedures on living animals if there is the potential to cause physical damage or pain. They are also the person the student comes to obtain permission to do an assignment using the clinic, and clinic or client animals. If the CM is not the ultimate decision maker in the clinic, they, in turn are required to obtain permission.

We emphasize to the student that their assignments and studies are to be done on their own time. If they are paid for 20 hours, they are expected to work for the clinic for 20 hours. They will have to arrange time to do assignments on their own time.

What do the "Assignments" entail?

- Our students are assessed in three major ways
 - On line quizzes
 - Written midterm and final exams
 - Assignments and Evaluations
- These assignments are completed in one of three ways
 - The most common method is for the student to video themselves performing the assignment (jugular venipuncture in a dog for example). They send the video to their TRU course instructor and it will be reviewed and critiqued.
 - These video clips are "student produced". We do not expect high technological quality. We only require that we can clearly view the procedure. The student is given explicit instructions on what we require in a video.
 - For example, we need to see the student, not just their hands
 - The film is not to be edited
 - We do not allow coaching or prompting
 - Another method is a checklist which is signed off by you, the CM, when the student has successfully completed the task. (for example, in Anatomy, the student may have to identify the major organs in the canine abdomen using a surgical case in situ, a cadaver, or radiographs. The CM would check off that this was successfully done)
 - Written assignments submitted to course instructor(s)
- The evaluations are the responsibility of the student. They have to:
 - Organize any help that they may need (restrainers, camera person)
 - Organize when this can be done. If it is more suitable to do this in the clinic, they need to obtain permission from their CM and negotiate a suitable time when it would create a minimum impact on the flow of the clinic
 - Organize the animal subject and obtain permission to use them. This may be their own animal, a clinic animal or a client animal.
 - Organizing all this is quite an exercise in logistics, human relations and time management for the student. After three years of doing assignments in this manner, the student becomes very efficient at skills that are daily requirements in a busy veterinary practice. We have received many comments from

instructors and advisors connected to our program on how mature our students seem and how well they communicate.

- The ideal student organizes all this and all you have to do is say "sounds OK to me". If, on the other hand, the student comes to you and says "we have an assignment" and then looks expectantly at you to take over the arrangements, this student will not be successful in our program.
- **There are special considerations for invasive procedures. If the assignment involves a living animal, we require that the CM or a delegate (DVM or RAHT) of the CM supervise the student. This is also a legal requirement of the provincial associations.**
 - We have had instances where students were doing venipunctures and cystocentesis on their own animals after hours in the clinic unsupervised. We have made it known to all our students in the strongest possible terms that this is not acceptable.
 - We provide demonstration videos for all our required assignments to the student. Please be aware that the video shows our method of performing the assigned skill. It may not be the same procedure that you use in your clinic. We do not consider our way to be the only way - an alternate but equivalent technique may also be acceptable.
 - For many invasive procedures we require the student to video themselves using a stuffed animal. This allows us to view the preparation, technique and understanding of the assignment before a live animal is used. This cuts down considerably on the stress on the animal, the student and the clinic staff.

Should I agree to this?

This program is not for all students or for all clinics.

- The student has to be mature, a good time manager and be able to work on their own.
- Ideally the student has worked for the practice for 6 months or more.
- The clinic and the student must have a good working relationship where the management and the rest of the clinic staff are supportive of the student. **The most important aspect to the success of a student in our AHTDE program is the support of their clinic!**

The clinic has to believe that this program benefits them as well. If the attitude is "you can take the program but don't expect us to help" - it won't work. It may be beneficial to meet with your staff to see if they are willing to take this on. We have found that if the management of the practice is supportive of their student it has a trickle down effect to all the staff. Conversely, a non-supportive management will make the learning atmosphere for the student very difficult.

If you feel that your clinic will not be able to provide positive support for the potential student then we do not advise taking on this obligation.

If on the other hand, you think that you would enjoy the role of a mentor, you believe in

the concept of what we are attempting to accomplish and you are supportive of your employee and prospective student then you will find this to be a very rewarding endeavour.

TRU AHTDE PROGRAM - FREQUENTLY ASKED QUESTIONS

1. How can I obtain Large Animal Experience?

If your clinic does not offer Large Animal services, you must arrange an alternative as you will need to have access during the Large Animal Science course (ANHD 3160) to the normal farm animals in order to perform the technical skills that will be covered. These alternatives may include the following options:

- Working or volunteering at least 20 hours (we would accept a volunteer position for this particular course) at a Large Animal or Mixed Animal practice. The 20 hours does not include the time spent on course work and assignments while present at the practice. You would be required to submit videos of yourself performing the procedures, and would need direct supervision by a CM.
- Attending a Large Animal Short Course at the TRU farm. This short course would be of five days duration. The student would have the opportunity to work with the common farm animal species. The student would be responsible for all personal expenses including transportation, accommodation, meals and protective clothing and footwear as well as the short course registration fee.

2. How do I obtain Laboratory Animal experience?

Options include:

- Attending a Laboratory Animal Short Course at our TRU AHT facility. This short course would be of five days duration. The student would have the opportunity to work with the common laboratory animals. The student would be responsible for all personal expenses including transportation, accommodation, meals and protective equipment and the registration fee.
- Attending selected Laboratory Animal Facilities in Canada on a practicum basis. TRU would assist in arranging these practicums.
- Many students will be able to complete the course by participating in the care of laboratory animal species that are presented at their clinics. Arrangements can also be made with local pet stores for access to lab animal species.

3. Does TRU arrange your Clinic Affiliation Site?

No, this is the responsibility of the student. The Clinic Affiliation Form (Appendix #2) must be submitted in the student's completed application package. There is always the possibility that the site that you have chosen does not meet the minimum facility standards for a clinic affiliation site; therefore you should begin this process well in advance of the program enrollment deadline, especially if an alternative site needs to be located.

4. What if I quit, lose my job or have to take an extended period of time off from work – can I still take the course or finish the course that I am currently enrolled in?

Each situation will be evaluated individually. The minimum number of hours spent at a clinical instruction site would still have to be met.

5. Do I have to come to TRU for any part of my training?

No, the program can be completed without the necessity of traveling to TRU. We do offer selected Short Courses (Large Animal handling and Lab Animal Handling) (and a celebratory dinner!) which are highly recommended but not mandatory.

6. How do I become a Registered Animal Health Technologist?

You would need to successfully complete the Veterinary Technician National Exam (VTNE) and apply and be accepted by your Provincial Animal Health Technologists Association. The TRU AHTDE program has accreditation with the Canadian Veterinary Medical Association (CVMA) and accreditation with the Ontario Association of Veterinary Technicians (OAVT). It is recognized by all Canadian Provinces.

7. How do I access Moodle?

Go to the TRU website www.tru.ca and then to the Moodle link (which is at the bottom of the main homepage under “Students”). When you have registered for a particular AHTDE program course, we will register you in Moodle as well. Your Moodle ID is your student number (ex. T0001113) and your password is set as your birthdate (ex. 900609 – this would be a birthdate of June 9, 1990).

AHTDE PROGRAM CALENDAR

School Year Course Start Dates

Enrollment is on a yearly basis with classes starting the beginning of January of each year.

Winter Semester	January to March – 12 weeks
Spring Semester	May to July – 12 weeks
Fall Semester	September to November - 12 weeks

Application deadline: September 30 for the next January class.

Payment of fees: Within 4 weeks of official notice of acceptance but must be paid prior to the start of classes. Payments are on a semester by semester basis.

APPENDIX #1

HOW TO APPLY

Applications into the AHTDE program must be received by September 30th of the year preceding the January start date.

Please complete and submit the following:

- **TRU Application for Admission to TRU** - Please complete and submit this document. <http://www.tru.ca/admissions/apply.html>
- **TRU Animal Health Technology Distance Program Admission Information** – please refer to the website for further information. . <http://www.tru.ca/science/programs/aht/disted.html>
- Clinical Affiliation Form which includes signed Clinical Mentor Letter (listed in this document) - this document must be signed by the CM's and accompany the application submission.
- Health and Safety Form (listed in this document) - this document must accompany the application submission.
- **2 Reference Forms** – at least one of these to be from your potential Clinical Mentor indicating under Additional Comments:
 - their support of you taking this AHTDE program;
 - how long you have been in their employ;
 - that you are **employed** for a minimum of 20 hours per week (volunteering does not apply).
- Student Awareness package – this must be signed indicating the student has read and understood the 4 documents.

Your application must be submitted to the attention of AHTDE Application Clerk, c/o Admissions, Thompson Rivers University, 805 TRU Way, Kamloops, BC V2C 0C8

Please do not mail to TRU Open Learning Distance programs.

For further information contact either of the following: ahtprograms@tru.ca

TRU AHTDE Program Assistant
Carol Costache
ccostache@tru.ca

TRU AHTDE Program Coordinator
Heather Shannon
hshannon@tru.ca

TRU Animal Health Technology Distance Education Program
Thompson Rivers University
805 TRU Way, Kamloops, BC V2C 0C8
Tel 250-852-7170 Fax 250-828-5194

APPENDIX #2

**Clinic Affiliation Form
(CAF)**

**To be completed and submitted
with the
AHTDE Application Package**



THOMPSON RIVERS UNIVERSITY

To Clinic Mentor(s):

Thank you for becoming a Clinical Mentor (CM) for your student/employee. We are looking forward to working with you.

We would like to provide you with some information that will encourage a positive experience for your student as well as your clinic and staff.

As you know, someone in your clinic (a DVM or an RAHT/RVT) is required to become the student's CM. There can be more than one CM per clinic and they can change if necessary – we just need to be kept informed. We would prefer if the CM individual(s) stayed fairly constant which helps with continuity but we also understand that life happens!

***We do need to be kept informed of any changes in Clinical Mentors. ***
Please inform us when a change occurs by contacting our program assistant:
Carol Costache email: ccostache@tru.ca or ph: (250) 377-6104

The CM is a mentor. Although you won't prepare and deliver lessons or give exams, you should be aware of the progress of your student and the courses in which they are currently enrolled. It would be most helpful for your student if you can 'quiz' them and encourage them to participate in activities that will reinforce their current learning.

Qualifications for Clinical Mentor(s):

- DVM licensed to practice in Canada
or
- RVT with minimum 2 years post graduate clinical experience

You, the CM, will be the person that the student comes to if they have a question or do not understand a concept. The CM will directly supervise procedures which have the potential to cause physical damage or pain to an animal. They are also the person the student comes to obtain permission to do an assignment using the clinic, and clinic or client animals. If the CM is not the ultimate decision maker in the clinic, they in turn are required to obtain permission.

The most important aspect to the success of a student in our AHTDE program is the support of their clinic! Without clinical support, it is unlikely the student will be successful with this type of program. The clinic has to believe that this program benefits them as well. It will be beneficial to have a staff meeting. We have found that if management of the practice is supportive of their student, it has a trickle down effect to all the staff. With a student in your midst, the interest and clinical expertise of all the clinic staff is likely to increase; with the support of their CM and the entire clinic staff, the student is very likely to succeed.

Qualifications for the Clinic Affiliation Site

- AAHA or CVMA approved full service clinic
- Small (dog & cat) animal or mixed animal practice
- Employ student a minimum of 20 hrs/week throughout the 3 year AHTDE program

Clinical mentor support is one of the vital components to your employee's success along with student access to the technical aspects of the clinic. To succeed in this program, the student requires a minimum of 8 hours per week (minimum 1-2 hrs consecutive) in the treatment, surgery and lab areas of the hospital to observe, learn and practice the duties and skills of an RVT. They require this continuous opportunity to practice their hands-on skills. In most cases, lack of either of these two vital components has been the reason for failure.

Some courses have a very heavy video evaluation component while others have little or none. Evaluations, such as jugular venipuncture, cystocentesis, male dog catheterization, female dog catheterization, anesthetic inductions, will require more videotaping of procedures and direct supervision by the CM (and if the CM is not a DVM, then a DVM will need to be available also). Again, being aware of the current course of study and the requirements will enable you to support your student/employee.

As the Clinical Mentor, you are a very important member of the educational team. We encourage you to maintain open communication with your student and with us, at TRU. Please do not hesitate to contact us (either specific instructors or the coordinator of the AHTDE program).

The AHTDE program cannot be successful without your support. We, at TRU, recognize this and are appreciative of your involvement.

Sincerely,

Heather Shannon, RVT
Coordinator
Animal Health Technology Distance Program
Thompson Rivers University
Ph: (250) 852-6331
Email: hshannon@tru.ca



THOMPSON RIVERS UNIVERSITY

Evaluations and Assignments for

Animal Health Technology Distance Education Program

Please note that this is NOT a complete list of all assignments and evaluations required by the student, but only those involving animal usage and/or videotaping and/or clinical facility use.

As the Clinical Mentor, please initial or sign where indicated to acknowledge your understanding of the Evaluations and Assignments for each course. By signing, you also acknowledge that the student will have opportunity to perform these tasks in the clinic.

Students are not limited to ONE CM. In fact, the more support the better.

If you are not the owner of the practice or DVM responsible for the practice, we also ask that this person sign the document, giving their permission for these tasks to be performed in their clinic.

Your student also needs to review and sign this document at the end. Please ensure the student keeps a copy of the signed document.

Please include this signed document with the student's application package.

Although there may be only a single graded assignment listed in a specific course for a specific technical skill/procedure, the student may be and will be required to demonstrate and perform some tasks multiple times throughout the program, in order to ensure the student graduates with adequate practical proficiency in the in those practical skills, as listed in the CVMA Essential Tasks List.

For example, there is a single graded assignment requiring an anesthetic induction in ANHD 3140. However, the student is required to perform a total of 6 anesthetic inductions, 3 with dogs and 3 with cats, over the course of semesters 8 and 9.

My signature below indicates that I acknowledge that sufficient opportunity will be given to allow the student to accomplish these Essential Tasks

Clinical Mentor: _____
Signature

ANHD 1100- Anatomy

Video submissions will include:

- Student showing the anatomical planes, directional terms and joint movement terms on a dog & cat
- Student showing the major skeletal bones on a dog or cat & a horse
- Student showing the different parts of the bone and joint (stifle) on a beef, sheep or pig femur
- Student showing the different parts of a horse's hoof
- Student ID'ing listed nerves or nerve related structures and then demonstrating the clinical signs you would see with listed conditions
- Student ID'ing anatomical structures of the ear and eye, then placing fluorescein stain in the eye and describing the passage of the dye from the eye out the nose
- Student using an ophthalmoscope to visualize the retina

Other assignments:

- Wound healing assignment where the student tracks a healing wound for 6 weeks with pictures and descriptions of the different stages
- Student draws a diagram explaining how the muscles of the eye work
- Student sketches what they saw when visualizing the retina and labels the parts of the eye

_____ (Initials)

ANHD 1010 – Veterinary Office Management

Video submissions will include:

- Mock interview
- Oral presentation

Other assignments:

- Resume and cover letter
- Patient Record complete with prescription labels and invoices
- Client education pamphlet / brochure
- Several terminology assignments
- Some Non-Graded exercises to be done with CM

_____ (Initials)

ANHD 1120- Animal Nursing 1

Video submissions will include:

Preliminary evaluations on stuffed animal include:

- Subcutaneous, IM (epaxial and quadriceps and/or SM/ST) and IV cephalic injections
- Blood collection with a syringe and needle and a vacutainer system

Final evaluations will include:

- Subcutaneous injection on a dog and a cat
- Intramuscular injection (epaxial and quadriceps and/or SM/ST) on a dog and a cat
- Intravenous injection (cephalic) in a dog and a cat
- Blood collection via jugular from a dog (vacutainer method) and a cat (syringe and needle method)
- Effective restraint of the animal for the above techniques
- Recurrent spiral and Figure 8 bandage

Other assignments:

- Various postings on the discussion board reviewing information learned that week
- WHMIS exam
- Nutrition calculations
- Checklists to be completed with the CM:
 - small animal restraint
 - physical exams on a cat and dog
 - Eye exam
 - Ear exam
 - evaluating body scores on cats and dogs (5 each)
 - nail trim on a cat and Soft Paws application
 - bathing and nail trim on a dog
 - anal gland expression

_____ (Initials)

ANHD 1110 – Parasitology

There are no video submissions for this course.

Assignments include:

- Development of a professional client handout/brochure designed to educate the lay person/client on a commonly encountered parasite.
- Examination of a minimum of 40 parasite recoveries, 15 each from dog and cat, and remaining 10 can be any combination of equine, ruminant, avian, porcine, or pocket pets but must include at least 3 of these species. The student can go to the local stock auctions and collect fecal samples from the large animal species if they do not have ready access. This assignment will benefit more if you can acquire positive samples.
- Students should try setting up some of the different recovery techniques – use Baermann's on a bovine sample for instance – Use a sugar solution, centrifugation, sedimentation, collect and examine skin scrapings.

_____ (Initials)

ANHD 2130- Radiology

Video submissions will include:

- Demonstration of set up for taking feline abdominal rads (using a stuffed toy as the patient) including measurement, collimation, cassette selection, tube positioning, machine settings, processing, log book and SAFETY measures
- Review of injections (IM and SC)

Radiograph submissions:

- Feline abdomen
- Canine thorax
- Canine radius/ulna
- Feline femur
- Canine pelvis – hip dysplasia – sedation required for this study

Other Assignments:

- Radiographs of all the personnel shielding in the clinic and evaluation of it as well as radiograph of a collimation check
- Technique charts
- Review of clinical radiographs with CM

_____ (Initials)

ANHD 1210 – Microbiology

Video submissions will include:

- Streaking an agar plate for isolated colonies
- Loading and preventative maintenance of an autoclave
- Proper hand washing technique

Other evaluations include:

- Interpretation of dermatophyte testing if done in clinic
- Correct interpretation of direct smears and cell recognition
- Sending out samples for microbial analysis such that any pathogens present will be recovered
- Correct interpretation of California mastitis test if done in clinic

Assignments include:

- Journal entries reflecting on learning
- Forum discussions
- Growing bacteria from various sources and describing macroscopic and microscopic morphologies of isolated colonies
- Identification of common veterinary pathogens using flowcharts
- Case presentation

_____ (Initials)

ANHD 2100 – Anatomy & Physiology 2

Assignments include:

- Assignment 1 – Muscular System – video
- Assignment 2 – Necropsy with CM in clinic
- Assignment 3 – Cardiovascular System – ECG assignment and video
- Assignment 4 – Intubation – place endotracheal tube and orogastric tubes with CM in clinic
- Assignment 5 – Dentition – video assignment
- Assignment 6 – Reproductive System – with CM in clinic
- Assignment 7 – Avian Physical Exam – video assignment

_____ (Initials)

ANHD 2110 - Hematology

There are no video submissions for this course.

Assignments include:

- Prepare and stain 2 useable blood films, preferably from a canine sample. Have CM confirm appropriate staining (not too dark, too pale, too blue or too pink!) and then submit a digital image of the slides.
- Using a suitable blood sample obtained in your clinic, perform a hematocrit in duplicate. Have CM confirm results. Report results as well as submit a digital image of the hematocrit tube on the hematocrit reader.

_____ (Initials)

ANHD 2140- Pharmacology and Math

Video submissions will include:

- Clinic presentation on a new product or a product currently in use that new info is available on
- Student discharging a patient to a “client” and discussing a medication

Assignments:

- Discussion board postings
- Math calculation assignments
- Prescription Diary (10 prescription labels required)
- Handout detailing information given to the owner of the discharged patient
- Student develops a Controlled Drug SOP for their clinic

_____ (Initials)

ANHD 2150- Animal Diseases

This course does not have any required video submissions.

The students must research a topic of immunological importance to veterinary practice.

They may present it in a written format or as a video of a presentation to the clinic.

ANHD 2120 - Animal Nursing 2

Mock Evaluation:

- Urinary Catheterization on a male dog
- Cystocentesis

Final evaluations will include:

- Urinary Catheterization of the Male Canine _____ (Initials)
- Patient skin prep
- Surgical Hand Scrub plus Gowning / Gloving using Open and Closed Technique
- Pack Preparation
- Patient Preparation and Draping Technique (done on real patients)
- Opening Instrument pack / Organizing Instrument Table and Passing Instruments (done in surgical suite)
- IV fluids

Other Assignments:

- Rehabilitation
- Autoclave
- Pre and Post Op Considerations
- Personnel scrub
- Selected Surgical Procedures
- Checklists to be completed with the CM:
- Bladder palpation
- Sutures _____ (Initials)

ANHD 3170 - Animal Nursing 3

Preliminary evaluations on stuffed animal include:

- Female dog catheterization practice
- Male Cat catheterization practice

Final evaluations will include:

- Urinary Cystocentesis of an awake dog or cat
 - (technique from Animal Nursing 2) _____ (Initial)
- Urinary Catheterization of an awake male dog
 - (technique from Animal Nursing 2) _____ (Initial)
- Urinary Catheterization of an anesthetized /
 - Sedated/deceased female dog (technique from Animal Nursing 2)
_____ (Initial)
- Urinary Catheterization of an anesthetized /
 - Sedated/deceased male cat (technique from Animal Nursing 2)
_____ (Initial)
- Dental COHAT on an anesthetized/deceased cat _____ (Initial)
- Dental COHAT on an anesthetized/deceased dog _____ (Initial)

Other Assignments:

- Dental COHAT practice with CM
- Dental assignment – written and providing pictures
- Dental – anatomy of the teeth
- Sedated feline cystocentesis with CM
- Semen collection – written assignment
- Vaginal Cytology on a female dog
- Tissue collection
- Necropsy

_____ (Initials)

ANHD 3110 – Clinical Pathology

This course does not have any required video submissions.

Assignments:

- Urinalysis – dipstick and sediment evaluation, results to be confirmed by CM
- 2 short written discussion topics

ANHD 3120 – Intensive Care

- Case study assignments (2 case studies each with 3 parts) – written assignment
- Critique of an anesthetic protocol for a geriatric or emergency patient – written assignment
- Toxicology assignments – 2 different toxins researched – written assignment
- Video evaluation of an anesthetic protocol
 - premedicating animal
 - placing an IV catheter in a vein other than the cephalic vein
 - inducing the animal with IV induction
 - intubating
 - maintaining the animal in a surgical plane of anesthesia
 - monitoring the patient
 - perform assisted ventilation
 - recovering the patient
- Video assignment showing performance of a blood cross match
- Video evaluation of a mock emergency – requires clinic participation

_____ (Initials)

ANHD 3140 - Anesthesia

Video submissions will include:

- Submit videotape demonstrating performing and recording routine ECG on an awake patient
- Demonstrate via videotape the technique of proper insertion of an IV indwelling catheter
- Anesthetic machine
 - trace fresh gas flow for a circle system
 - trace fresh gas flow for a non re-breathing circuit
 - show how to hook up and check an anesthetic machine for leaks using the following circuits
 - circle system
 - non rebreathing system
 - show how to calculate how large a leak within the system, if any
- submit video tape of 3 different animals (dog or cat) that have received one drug from the following drug classifications
 - phenothiazines – ex. Acepromazine
 - benzodiazepines – ex. Diazepam or Midazolam
 - anticholinergics
 - opioids
 - alpha 2 agents – ex. Medetomidine

_____ (Initials)

- submit video tape demonstrating a complete anesthetic protocol on one animal including
 - premedicating animal
 - inducing the animal with IV induction
 - intubating
 - maintaining the animal in a surgical plane of anesthesia
 - recovering the patient

_____ (Initial)

IF YOUR STUDENT IS UNABLE TO PERFORM THE LARGE ANIMAL AND/OR LAB ANIMAL SKILLS IN YOUR CLINIC, WE STILL REQUIRE THE CM TO INITIAL THEIR ACKNOWLEDGEMENT OF THIS REQUIREMENT (even if the student will accomplish these tasks at a practicum or at TRU's Wet Labs 1 week in August of Year 3).

Lab Animals - ANHD 3150

Assignments:

- Facilities paper – design a lab animal facility (on paper) and write a paper describing all the functional units of the facility
- Research paper – design a research project, conduct it and write a scientific paper

These above assignments constitute a large component of the grades for this course.

Video submissions will include:

- Evaluations include: demonstrate (either by coming to the onsite wet lab in August of the final year OR by finding a practicum site in a research facility and submitting videotape); handling, restraint and sexing of the following species:
 - rabbit
 - guinea pig
 - rodents – mice, rats, hamsters and gerbils
 - avians
 - reptiles

_____ (Initials)

Large Animals - ANHD 3160

*****For safety reasons these skills must be performed in the presence of a CM with large animal experience. Cattle and horses are large, strong and quick – exercise the utmost caution when working around them*****

Evaluations Include:

Bovine Evaluations

- Catch, halter and tie a cow/steer/heifer or bull
- Demonstrate a bovine tail hold (tail jack)
- Demonstrate a bovine tail twist
- Body Condition Score
- Take a rectal temperature
- Auscultate Heart and Lungs
- Perform jugular venipuncture – using the vacutainer system
- Perform coccygeal venipuncture – using the vacutainer system
- Use of a balling gun
- Perform an IM and a SC injection – use the syringe method

_____ (Initials)

Caprine Evaluations

- Catch and restrain a goat
- Perform a TPR and auscultate the rumen
- Body Condition Score
- Tip over to check all four feet
- Perform jugular venipuncture – using the vacutainer system
- Perform an IM and a SC injection

_____ (Initials)

Equine Evaluations

- Place a halter on a horse and tie the horse up to a fence
- Using a length of soft rope, tie a loop around the horse's neck using a **bowline knot**
- Body Condition Score this same horse
- Perform a TPR
- Auscultate the heart
- Obtain a pulse from the same horse
- Obtain the respiratory rate from the same horse
- Age the horse by checking its teeth
- Apply a tail wrap
- Apply a tail tie using a length of soft rope
- Apply a leg bandage to a front or rear leg
- Pick up and clean all four feet in an appropriate manner
- Using a dose syringe (or paste wormer)
- Perform jugular venipuncture – using the vacutainer system
- Perform an IM and a SC injection

_____ (Initials)

Ovine Evaluations

- Catch and restrain a sheep
- Check all four feet
- Body Condition Score
- Age the sheep by checking its teeth
- Perform a TPR and auscultate the rumen
- Perform jugular venipuncture – using the vacutainer method
- Perform an IM and a SC injection

_____ (Initials)

Additional Clinical Mentors:

_____ **CM Signature** _____ **Print Name** **Sample Initial** _____

_____ **CM Email Address**

_____ **CM Signature** _____ **Print Name** **Sample Initial** _____

_____ **CM Email Address**

_____ **CM Signature** _____ **Print Name** **Sample Initial** _____

_____ **CM Email Address**

_____ **CM Signature** _____ **Print Name** **Sample Initial** _____

_____ **CM Email Address**

_____ **CM Signature** _____ **Print Name** **Sample Initial** _____

_____ **CM Email Address**

_____ **CM Signature** _____ **Print Name** **Sample Initial** _____

_____ **CM Email Address**

APPENDIX #3

INVIGILATOR INFORMATION FORM

Animal Health Technology Distance Education Program

Please contact a local University or Community College in your area and arrange with them to receive and invigilate your examinations. These offices may be called the Assessment Center, Counseling Office, Testing Center, Examination Office, etc. Please contact the TRU AHTDE program if alternate arrangements are necessary. **The student is responsible for the invigilation fees.**

Student's Name: _____

Course: _____

Date of Writing Exam: _____

Invigilator's Name: _____

Title: _____

Department: _____

Institution: _____

Full Address: _____

_____ Postal Code: _____

Telephone: _____ Fax: _____

Email: _____

My relationship to the student is exclusively that of: _____

By signing this form I certify that the above information is true and that I have no personal relationship with the student.

Signature

Please mail the form back to: TRU Animal Health Technology Distance Education Program, 805 TRU Way, Kamloops, BC. V2C 0C8 or fax to 250-828-5194.

APPENDIX #4

TRU AHTDE PROGRAM STUDENT PACKAGE

HEALTH AND SAFETY AWARENESS FORM

The student should be aware that there are inherent Health and Safety conditions that they will be exposed to while working in a veterinary clinic. These conditions can include:

- Zoonotic diseases (diseases transmissible between animals to people).
- Exposure to radiation from radiographic procedures.
- Exposure to harmful chemicals in the form of solids, liquids and gases.
- The risk of injury from animal interactions including bites and scratches.
- The risk of injury from equipment such as needles and medical instruments.
- The risk of back injury from lifting animate and inanimate objects.
- The risk of developing allergies to animal and chemical irritants.
- The risk of hearing impairment from excessive barking.
- Several conditions that could have a deleterious effect during pregnancy.

Your place of work will be signing an affiliation agreement with the TRU AHTDE program which includes assurances that they have employee protection policies in place such as Workman's Compensation. However, it is essential that the student take the primary responsibility in assuring their own safety. **Do Not** agree to perform a task or assignment that you consider to be unsafe. **Do** familiarize yourself with your clinic's safety procedures dealing with such things as radiation protection and waste gas exposure. In Canada all workplaces handling potentially dangerous materials must comply with WHMIS standards (Workplace Hazardous Materials Information System). It is up to the employer to inform their employees of workplace hazards through the use of WHMIS labels, training and the use of material safety data sheets (MSDS). The student should ensure that they are informed of the WHMIS standards as it pertains to their workplace and be aware of where the MSDS information is kept and how to use it.

Please sign the following and return this page to the TRU AHTDE program upon application to the program.

I, _____, understand that there are inherent Health and Safety conditions that occur in Veterinary Clinics. While my signature does not absolve my employer and TRU from future liability due to negligence on their part I will endeavor to make my own health and safety a primary personal responsibility.

Signed:

Date:

Student Awareness Document **Animal Health Technology Distance Program - TRU**

Please read the following documents:

- **Expectations**
- **Academic Integrity and Plagiarism**
- **Forum Etiquette**
- **Pregnancy Policy**

After reading all 4 documents please sign the signature page at the end and return to Carol Costache at Thompson Rivers University.

Expectations of the Student:

- Log into Moodle daily (every 24 hours) to check messages and forum posts
- Respond to messages within 24 hours
- Keep up to date on forum post readings and participate as requested/required
- Read/review ALL of the information provided for you on Moodle (forum posts, assignments, evaluation summaries, forum etiquette, news updates, video's, etc.)
- Ensure that in the case of 2 instructors facilitating a course you review to whom your submissions are required to be submitted to
- Communicate with the instructor if you are going to be away (so we know of any absences IN ADVANCE whenever possible)
- Communicate with the instructor if you do not understand any material we are covering and/or would like more direction or explanation

Expectations of the Instructor/Lecturer/Facilitator:

- Check Moodle messages AND email at least once daily, and respond to you within 24 hrs. (In the case of a planned absence advance notice will be given)
- Anticipate graded material to be returned to you in a timely manner (within the week)



THOMPSON RIVERS UNIVERSITY

STUDENT ACADEMIC INTEGRITY

POLICYNUMBER	ED 5-0
APPROVAL DATE	NOVEMBER 24, 2014
PREVIOUS AMENDMENT	MAY 28, 2012
REVIEW DATE	FIVE YEARS FROM APPROVAL DATE
AUTHORITY	SENATE
PRIMARY CONTACT	OFFICE OF STUDENT AND JUDICIAL AFFAIRS

POLICY

Thompson Rivers University (TRU) students are required to comply with the standards of academic integrity set out in this policy.

It is the responsibility of TRU employees to take reasonable steps to prevent and to detect acts of academic dishonesty. It is an instructor's responsibility to confront a student when such an act is suspected and to take appropriate action if academic dishonesty, in the opinion of the instructor, has occurred.

Members of the TRU community, including students, engaged in research or scholarship, are also required to comply with the University's policy on Integrity in Research and Scholarship ED 15-2.

REGULATIONS

I. RESPONSIBILITIES OF THE OFFICE OF STUDENT AND JUDICIAL AFFAIRS

1. **Case Management:** The Office of Student and Judicial Affairs shall undertake all aspects of academic integrity case management following initiation of a case report, including but not limited to:
 - a. Ensuring completeness and accuracy of case files;
 - b. Correspondence with the student and the initiator of the Case Report Form as required;
 - c. Preparation of case files for consideration by the Academic Integrity Committee; and
 - d. Administration of resolutions and sanctions;

2. **Maintenance of Records and Reporting:**
 - a. The Office of Student and Judicial Affairs shall maintain the official and confidential institutional records of academic integrity cases for 10 years. Other members of the university community shall keep only those records relating to academic integrity cases which they may need in the future; such records will be kept in a secure location and are subject to the University's Records Retention/Destruction Policy.
 - b. The Office of Student and Judicial Affairs shall produce and present to Senate a report of academic integrity cases on an annual basis which report will not include references to students' names.
3. **Education:** The Academic Integrity Committee has a role to educate faculty and students on issues and standards relative to academic integrity.

II. COMPOSITION OF ACADEMIC INTEGRITY COMMITTEE

1. The Academic Integrity Committee shall be comprised of the following members appointed by Senate:
 - a. At least six Faculty Members, with no more than one from each School or Faculty, nominated by the respective Faculty Councils;
 - b. One Dean;
 - c. Three Undergraduate students nominated by the TRU Students' Union;
 - d. One Graduate student;
 - e. One TRU World International Education representative –nominated by the Associate Vice President, International and CEO Global Operations;
 - f. One Open Learning representative –nominated by the Vice Provost Open Learning;
 - g. One Library representative – nominated by the Library Director;
 - h. Director of Student and Judicial Affairs or designate (ex-officio, non-voting)
2. The Chair of the committee shall be a voting member of the committee nominated and elected by the committee.
3. The committee will have the support of one secretary provided by the Office of Student and Judicial Affairs (to maintain records, minutes, database and other such files). The secretary will set up all meetings and related duties.
4. Committee members will serve a term of up to three (3) years and may be reappointed, with the exception of student members who shall serve a term of up to one (1) year and may be reappointed.
5. A quorum will consist of fifty percent (50%) of voting members, and must include at least two (2) students and two (2) faculty members. Vacancies on the committee will not invalidate any of its decisions provided a quorum was present in person or by teleconference when the decision was made.

III. DUE PROCESS

In the administration and adjudication of cases of alleged academic dishonesty, the Office of Student and Judicial Affairs and the Academic Integrity Committee shall be guided by the following principles:

1. The right to a fair process, including for the participants to be initially informed of that process and their rights in the process, and to be informed of substantive decisions at each stage.
2. The right of participants to the support of an advisor or peer of their choosing at all stages of the process, provided that there is no right to counsel at hearings of the Academic Integrity Committee.
3. The right to know the details of the case including the right to view all written evidence.
4. The right to make submission and to provide responses to the submissions of others with the student being allowed the final submission.
5. The right to an impartial adjudicator.
6. The right to an expedient adjudication to normally take place within sixty (60) days of the commencement of the case.
7. The right of a student to be presumed innocent until a finding is made.
8. The right to reasonable confidentiality.

IV. DECISIONS

Notwithstanding policy ED 4-0, Student Academic Appeals, all decisions of the Academic Integrity Committee are final and binding and may be appealed to the Appeals Committee only on the grounds that the Academic Integrity Committee failed to follow the process set out in this policy and regulations.

V. SANCTIONS

The Committee shall determine a resolution or sanction from the list below:

1. **No Sanction:** In the event that the Academic Integrity Committee does not determine that dishonesty has occurred, no sanction will be administered and the student's file related to the allegation will be destroyed.
2. **Reprimand:** The Academic Integrity Committee forwards to the student a written warning, stating that the student's behaviour is unacceptable to TRU. A reprimand is recorded in the Academic Integrity Data Base as a first offence, and may be used only once in a student's academic career at TRU.
3. **Reduction of Grade:** The student's grade may be decreased on an assignment, test or project.
4. **Remedial Sanctions:** The Academic Integrity Committee may, in consultation with the relevant stakeholders, order other remedial sanctions as deemed appropriate

- (e.g., essay related to topic, resubmission of assignment, etc.). If the student fails to comply with this order the committee may impose an alternative sanction.
5. **Failure of Course:** The student is assigned an "F". In the case of an "F", a student may not withdraw from the course nor receive a refund. An "F" will appear on the student's transcript.
 6. **Suspension:** The Academic Integrity Committee may recommend to the President the suspension of the student from TRU.

VI. FORMS OF ACADEMIC DISHONESTY

1. Cheating

Cheating is an act of deception by which a student misrepresents (or assists another student in misrepresenting) that he or she has mastered information on an assignment, test, project or other academic exercise that the student has not mastered. Examples:

- a. Copying from another student's test paper or assignment.
- b. Allowing another student to copy from a test paper or assignments.
- c. Using the course textbook, electronic devices, or other material such as a notebook not authorized for use during a test.
- d. Collaborating during a test with any other person by receiving information without authority.
- e. Using exam aids or other non-authorized materials during a test (e.g., notes, formula lists, crib sheets etc.).

2. Academic Misconduct

Academic misconduct is the intentional violation of TRU academic procedures by tampering with grades, taking part in obtaining or distributing any part of a test (un-administered or otherwise), or by other means of academic deception not explicitly identified in other sections of this policy. Examples include:

- a. Stealing, buying, or otherwise obtaining all or part of a test, answer key, grade or other document by any means.
- b. Selling or making available to another all or part of a test or assignment, including answers to a test.
- c. Obtaining an un-administered test or any information about the test from another person.
- d. Providing an un-administered test or any information about the test to another person.
- e. Entering a building or office for the purpose of changing a grade in a grade book, on a test, or on other work for which a grade is given.
- f. Changing, altering, or being an accessory to the changing and/or altering of a grade in a grade book, on a test, a "change of grade" form, or other official academic records of TRU which relate to grades.
- g. Entering a building or office for the purpose of obtaining or examining a potential test document or assignment that has not been made public.

- h. Impersonating another student, or permitting someone to impersonate you, in any assessment.

3. Fabrication

Fabrication is the intentional use of invented information or the falsification of research or other findings. Examples include

- a. Listing sources in a bibliography not used in the academic exercise.
- b. Inventing data or source of information for research or other academic exercise.
- c. Submitting as one's own, any academic exercise (e.g., written work, printing, sculpture, etc.) prepared totally or in part by another.
- d. Citing information not taken from the source indicated.

4. Plagiarism

Plagiarism is the inclusion of someone else's words, ideas, images, or data as one's own work. When a student submits work for credit that includes the words, ideas, images or data of others, the source of that information must be acknowledged through complete, accurate, and specific citations, and, if verbatim statements are included, through quotation marks or block format.

By placing his/her name on work submitted for credit, the student certifies the originality of all work not otherwise identified by appropriate acknowledgements.

Self-plagiarism, which involves handing in all or part of an essay or assignment completed for another course without the consent of the instructor of the second course, is also a form of plagiarism, and an infraction of this Academic Integrity Policy.

A student will avoid plagiarism if there is an acknowledgement of indebtedness:

- a. Whenever the student quotes another person's actual words.
- b. Whenever the student uses another person's idea, opinion or theory, even if it is completely paraphrased in the student's own words.
- c. Whenever the student cites facts, statistics, or other illustrative materials from a published source or a lecture when that material is not considered common knowledge.
- d. Whenever the student uses images produced by another person.
- e. Citing facts or statistics or using illustrative materials considered to be common knowledge is not considered plagiarism.

Visit the Office of Student and Judicial Affairs website to access more information on the academic integrity process, resources and forms.

http://www.tru.ca/studentervices/Student_Judicial_Affairs.html



Forum Etiquette:

Message boards (Forums) are like any other organized gathering of people; there are rules of etiquette that everyone is expected to follow.

The lecturer reserves the right to delete messages which do not follow these guidelines.

Be kind, honest and supportive

- Be nice.
- Don't issue personal attacks, use profanity, or post threatening, abusive, harassing, or otherwise offensive language or images.
- Basic courtesy. Please be courteous to the other students and instructors in the class. You might find it helpful to read your posting out loud before you submit it: the "tone" is a very important part of electronic communication. When you read your message out loud does it sound the way you would speak to another student or the lecturer in the classroom?
- Make a personal commitment to learning about, understanding, and supporting your peers.
- Assume the best of others in the class and expect the best from them.
- Acknowledge the impact of sexism, racism, ethnocentrism, classism, heterosexism, homosexuality, ageism, and ableism on the lives of class members.
- Recognize and value the experiences, abilities, and knowledge each person brings to class. Value the diversity of the class.
- Never make derogatory comments toward another person in the class.
- Disagree with ideas, but do not make personal attacks.
- Make sure everyone realizes when you are trying to be funny. It is easy for messages to be misinterpreted since there are no physical gestures or voice inflections that accompany the text.
- Be open to be challenged or confronted on your ideas or prejudices.
- Challenge others with the intent of facilitating growth. Do not demean or embarrass others.
- Encourage others to develop and share their ideas.
- Be accommodating/adaptable to other opinions and ideas

Communicate clearly

- Write clearly when you compose a message. Review your message carefully before clicking **Send**; typos are confusing.
- Choose a descriptive subject. This will help other subscribers to successfully identify your topic.
- Pay close attention to what your classmates write in their online comments. Ask clarifying questions, when appropriate. These questions are meant to probe and shed new light, not to minimize or devalue comments.
- Remember to read what has previously been posted by others to avoid repeating comments.
- This site is part of a University course, so your writing style should conform to the rules of Standard English. Here are some guidelines for all messages posted to this course's Forum and that we e-mail each other:
 - avoid slang (e.g. "Wassup?", "Yo," and so forth)
 - don't curse
 - use proper spelling (e.g. no text messaging lingo)

Refrain from using ALL CAPS

- Typing in all capital letters is frowned upon; it's the equivalent of screaming at everyone. It also makes your message more difficult to read.

Don't post meaningless messages

- Posting messages that say nothing more than "Me too" is a quick way to irritate other members. If you agree with a posting, either enjoy your consent by yourself or reply with an informative comment about why you agree. Imagine how dull a board would get if it contained nothing but hundreds of "me too's."
- Participate actively in the discussions, having completed the readings and thought about the issues.
- Think before you post: "Is what I'm posting adding to this discussion or just repetition of what is already stated?" (It's certainly okay to agree or disagree with a point someone else has made, but please add to it by elaborating on your opinion)

Consider sending a reply by e-mail

- Some replies are better sent as an e-mail, rather than posted to a board. Personal messages and especially critical comments are more appropriate when sent directly and privately.

Refrain from cross posting

- Cross posting means posting a single message to several different topics, and it is almost never appropriate. Such posts tend to reduce the quality of the discussion and needlessly increase the traffic on the board. Find the best place for your post, and please confine your message to one topic.
- Make sure you are posting under the appropriate heading or thread.

Replying to Others Posts

- For a quick reminder of the topic in long threads:
 - include the initial post in your reply
 - a link to the initial post if in another post
 - or cut and paste a section of the initial post

Be careful when posting personal information

- Be careful about including private information about yourself, such as phone numbers and street addresses. Private information of that nature may be better sent by e-mail.
- If your posting is for a specific person or group, make sure you address it to them. Realize, however, that others will probably read it.
- Remember this is a university program and all personal posts (ex. Introductions of yourself) should be kept professional.

Follow the forum guidelines

- Check the message board area for specific Forum Guidelines, such as rules concerning which topics should be posted in which folders and answers to Frequently Asked Questions.

The lecturer reserves the right to delete messages that do not follow these guidelines.

Guidelines For the Pregnant Woman in a Veterinary Facility

Female veterinarians and staff, who continue to work in a veterinary facility while pregnant, must be cognizant about the potential for exposure to occupational hazards that may affect the mother or the fetus (*BCWMA Bylaws, Facility Practice Standards, Section 3 Facility General, Standard 2, Guideline h-iii*). Before a woman may realize she is pregnant, the potential exists for the embryo to have already been adversely affected by a harmful or noxious agent. The greatest risk to the fetus is in the first trimester. Therefore, it is impossible to totally eliminate every risk while working. However, it is recognized that many women work in veterinary facilities throughout pregnancy and deliver healthy, normal babies. To maximize the chances of this outcome, it is important that everyone involved take a preventative approach to workplace safety issues.

It is the responsibility of all workers to be aware of their own fertility status and to be fully informed about the risks in the work area. It is also the responsibility of a worker to follow all safety procedures and use or wear the protective equipment that is required.

The Designated Member (DM) is responsible for advising all workers, including students and volunteers, of any potential or actual hazard to health or safety. The DM *must* ensure that measures are in place that encourage all workers (including breast feeding women) to discuss their pregnancies and planned pregnancies with the DM, or another designated person employed at the facility to which this duty is delegated, to ensure that potential workplace risks to the unborn child are reviewed and accommodations are discussed. In addition, the DM *must* be cognizant of exposure issues affecting other persons who come into contact with the practice, including clients or sales representatives, who may not know or have intended to make known to the DM, that they are pregnant.

The DM and the pregnant woman *must* carefully weigh the risks against the benefits when performing every specific job duty in a veterinary facility. The DM *must* provide and review special written safety instructions for specific or unique procedures. The risk is reduced and the chance for having a healthy baby is improved, if the pregnant woman exercises caution and judgment in the following occupational areas.

1. Lifting heavy objects and performing arduous physical exertion

Avoid slips, falls, the lifting of heavy objects such as medium to large sized dogs, and overt physical exertion that may occur when working with large animals (e.g., internal surgery or manipulation foot examination, etc) as it may increase the risk of spontaneous abortion (see the American Medical Association's "*Guidelines for the Continuation of Various Tasks During Normal Pregnancy up to the listed Weeks of Gestation*" attached as Appendix I).

2. Anaesthetic gases

Waste anaesthetic gases are potentially hazardous to everyone in the facility. Some studies have shown an increase in the incidence of congenital abnormalities and miscarriage after pregnant women are exposed to waste anaesthetic gases in the surgical environment. Workers should avoid exposure to waste anaesthetic gases by doing the following:

- a) Ensure the anaesthetic machine and ancillary equipment is properly serviced and maintained within the previous 24 months;
- b) Have vaporizers filled and emptied by non-pregnant staff at the end of the workday when personnel are leaving. If a spill occurs, the pregnant employee *should* not clean it up. Ensure all staff are informed of the spill, the room is closed to unnecessary entry until the gas has been properly vented by opening the window and circulation the air with fans;
- c) Employ good anaesthetic technique (i.e., proper intubation with appropriately sized, cuffed endotracheal tubes; appropriate breathing system for the size of animal; avoid the use of masks and induction chambers; do not turn “on” the vaporizer before connecting the animal to the anaesthetic machine; and, leave the patient attached to the breathing system until extubation then express the reservoir bag and flush with oxygen into the scavenging system before disconnecting);
- d) Immediately correct an anaesthetic leak before continuing with surgery;
- e) Use only equipment that has an effective scavenging system, whereby waste gas is vented outside the facility. The absence of the characteristic anaesthetic gas odor is no guarantee that safe levels are present. This requirement applies equally to fumes associated with chemical contaminants from X-rays, tissue preservatives, concentrated cleaners and solvents, and exhaust;
- f) Ensure that any pregnant woman is not in the same room as the anaesthetic machine when it is in use if the scavenging system is not in operation;
- g) Ensure that any pregnant woman is not in the recovery room until the animal is awake and the room has been vented (i.e., once the procedure is over, the anaesthetic machine vaporizer is turned “off” and the animal is maintained on oxygen to speed up recovery. When the animal has gained the swallowing reflex, the animal is disconnected from the scavenging system. At this point there may still be anaesthetic gas in the lung that is being exhaled into the environment but it is not being vented outside the facility. Anyone in the same room will be breathing in some quantity of anaesthetic gas.)

3. Chemicals and Biologicals

The pregnant women should avoid handling or handle with extreme care (i.e., wear gloves), to avoid skin contact, with the following:

- a) ethylene oxide (Anprolene);
- b) hexachlorophene soaps;
- c) pesticides, especially in concentrated dips;
- d) solvents such as toluidine, ether, chloroform; alcohol, methylated alcohol; and,
- e) preservatives such as formalin, formaldehyde, and Bouin’s solution.

The pregnant employee *should* avoid ingestion through drinking and eating while handling these same chemicals.

The pregnant employee *should* also avoid the handling of biological and chemical waste and disposal of sharps. The storage of biologicals and chemicals *must* be provided separately from storage normally used by staff (e.g.; refrigerator).

The Vancouver Island Health Authority, Prevention Services, has a pamphlet entitled “*Inhalant and Solvent Use During Pregnancy: Effects on Mother and Baby*”

(k:\allshare\emd\handouts\Inhalant&solventuseinpregnancy). This pamphlet advises that

common household or industrial product chemicals such as solvents (glue, gasoline, paint thinner, cleaning fluids), and aerosols (hair and paint spray). That if inhaled or sniffed, may result in feelings similar to alcohol intoxication to the pregnant women and symptoms of alcohol-like withdrawal in newborn babies (*“Toluene Embryopathy Syndrome”*) with lasting physical, mental, and behavioural problems. Because there is little information available on inhalant and solvent use while breastfeeding, the general recommendation contained in this pamphlet is to *“cut back or stop using inhalants and solvents at any point during pregnancy and breastfeeding”*.

WHMIS

The *Workplace Hazardous Materials Information System (WHMIS)* is a regulation that helps keep supervisors, workers and students informed about workplace risks. WHMIS is a system that includes hazardous product warning labels, an inventory of all hazardous substances in the area, and a *Safety Data Sheet (SDS)* for each type of hazardous product. The WHMIS label will contain: (1) product identifier, (2) hazard symbol, (3) risk phrases (to alert workers on specific hazards of the product), (4) precautionary statements, (5) first aid measures, (6) supplier identification, (7) and reference to the lengthier *SDS*. All staff *must* pay attention to the *WHMIS* label on the product. All staff *must* receive education on *WHMIS* as well as precautions to take specific to the chemical, first aid in the event of exposure, and incident reporting. Regular meetings with all workers *must* be held to review the inventory, labels and *MSDS*. The minutes of these meetings should be maintained in a binder for all workers and Inspectors (BCVMA, WCB) for review.

The pregnant employee *should* read, in addition to the *WHMIS* label, the product *SDS* because it may contain information on teratogenicity; an agent capable of causing birth defects and spontaneous abortions. The *SDS* is provided by the supplier and usually accompanies the chemical. The purpose of an *SDS* is to provide health and safety information about a hazardous substance to enable a person to make informed decisions about the use of a hazardous product and how to protect against possible exposure. Some of the information includes toxicity of the substance health and reproductive effects, spill response procedure, and protective equipment. Note: products regulated as drugs or pesticides (e.g. disinfectant) are not regulated under *WHMIS*. Detailed information may be found on product labels. All veterinary facilities *must* maintain a binder with the *SDS* for every product in the facility or have this information readily available as an online link.

2. Pharmaceuticals

Pregnant, breastfeeding or attempting to reproduce employees *must* avoid or handle with care the following:

- a) cytotoxic agents for cancer therapy; and,
- b) contraceptive products, such as prostaglandins.

A pregnant woman must not contact the gel in the Fentanyl/Duragesic Patch, and other substances such as dimethyl sulfoxide, that act to facilitate the systemic absorption of other topically applied drugs.

A pregnant woman *should* avoid being in the same room when mugwort (Aiye), the herb used in the preparation of moxa, is burned. The room should not be entered until

properly ventilated. Infusions have been reported to cause strong uterine contractions in rabbits and calves. This recommendation is based on anecdotal information from the *Veterinary Information Network*.

3. Zoonotic diseases

Small Animals

- i. **Toxoplasmosis** (caused by *Toxoplasma gondii*) is a primary zoonotic concern to a pregnant woman because this parasite can cause serious miscarriage, early delivery or stillbirth, birth defects or poor growth (*BC Health Files, No. 43, April 1995*). Mothers can avoid exposing the fetus to the infective oocyst by:
 - a) thorough washing of hands after handling each cat;
 - b) refraining from handling cat feces or cleaning litter boxes;
 - c) have a non-pregnant person change the litter box every day; and,
 - d) refrain from handling stray cats; cats are most commonly exposed to toxoplasmosis when young, outdoors, and actively hunting.

Ingestion of raw or under-cooked meat is the most common method of human toxoplasmosis infection.

Women who wish to determine their susceptibility to toxoplasmosis can have their antibody titer assayed, and they *should* discuss the results with their medical doctor.

- ii. “**Cat scratch fever**” is caused by the bacteria *Bartonella henselae* and has been reported to cause abortion in humans.

Lyme disease is caused by the spirochaete bacteria, *Borrelia burgdorferi* which is transmitted by a bite from an infected tick (arthropod insect) to humans and dogs. Other animal species that have been reported to have been infected with the bacteria include cats, horses, cattle, and small ruminants such as goat and sheep.

Casual human contact with an infected animal poses no risk of infection. The risk to humans for acquiring infection from blood sucking insects such as deerflies, horseflies, and fleas is very unlikely. The bacteria have been found in high concentrations in animal urine, unpasteurized milk, raw meat, and in the blood for unspecified periods of time.

Lyme disease can infect the fetus of a pregnant woman by transplacental transmission that may result in various medical problems including fetal death, hydrocephalus, cardiovascular anomalies, neonatal respiratory distress, hyperbilirubinemia, intrauterine growth retardation, cortical blindness, sudden infant death syndrome, and maternal toxemia of pregnancy.

http://www.petmd.com/dog/conditions/infectious-parasitic/c_dg_lyme_disease

A pregnant woman, veterinary staff, and the public in general can prevent the acquisition of infection from a tick at the time of its removal from an animal by:

- a) using thin-tipped tweezers with a gloved hand to grasp the tick;
- b) do not crush the tick (or flea) between the fingers of an ungloved hand;
- c) do not allow blood from the tick or from the site of removal from the animal's skin to contact human skin;
- d) disinfection of the animal's bite site with an appropriate antiseptic; and,

- e) wearing light-colored, long-sleeved clothing to handle animals in the spring and summer to more easily spot and remove ticks before they become attached (note: the numbers of numphal ticks that feed increases in the spring and summer).

iii. **Leptospirosis** has apparently been showing up lately:

From the CDC:

"Not much is known about leptospirosis infection during pregnancy. Some studies have reported miscarriage or fetal death depending on when during pregnancy the infection occurred. Leptospirosis is usually treated with antibiotics, such as doxycycline or penicillin. However, there are some concerns with the use of doxycycline during pregnancy."

<https://www.cdc.gov/leptospirosis/>

Pocket Pets

Lymphocytic choriomeningitis virus (LCMV) is an adenovirus found in the urine, feces, and saliva of infected rodents such as the common house mouse, and pet mice, hamsters and guinea pigs. Aerosolization and subsequent inhalation of infectious droplets, ingestion of food contaminated with virus, contamination of mucous membranes such as the mouth with infected body fluids or by directly exposing cuts or other open wounds to virus-infected rodent blood may result in human infection. The consequence of infection in a pregnant woman may include abortion, congenital hydrocephalus and chorioretinitis, and postnatal infection (mental retardation) <https://www.cdc.gov/vhf/lcm>

A pregnant woman and other staff that develop fever, malaise, anorexia, muscle aches, nausea, vomiting within 8 to 14 days of exposure to handling of rodents should consult their physician.

A pregnant woman, as well as other workers, at a veterinary facility, laboratory, or at home, and the public in general, can prevent infection by:

- a) avoiding or minimizing direct physical contact with rodents or exposure to their excreta;
- b) ensuring adequate ventilation is provided to any heavily infested, previously unventilated enclosed room prior to cleanup;
- c) applying diluted household bleach solution to visible rodent droppings and their immediate surroundings;
- d) wearing gloves when cleaning animal cages and water and feed containers; and,
- e) wearing a mask during the removal of cage litter and feces, and minimally disturbing the litter in order to prevent aerosolization.

Birds

Chlamydophilia psittaci is a bacterium that can be transmitted from birds to humans; the resulting human infection is referred to as psittacosis ('**parrot fever**' or '**ornithosis**'). Commonly infected caged birds include: psittacine (parrot type) such as cockatiels (parakeets) and budgerigars (budgies); and non-psittacine such as doves and pigeons. It is less frequently diagnosed in canaries and finches.

Most human cases are associated with exposure to pet caged birds; however, poultry and free-ranging birds, birds of prey and shore birds can also transmit the disease.

Typically, psittacosis causes influenza-like symptoms and can lead to severe pneumonia and nonrespiratory health problems. Severe illness with respiratory failure, thrombocytopenia, hepatitis, and fetal death has been reported among pregnant women. Persons exposed to infected birds should consult a physician if they develop these clinical symptoms. <https://www.cdc.gov/pneumonia/atypical/psittacosis.html> Exposure by the pregnant woman to the infective bacteria can be avoided or reduced by:

- a) Identifying infected birds to all persons who may come in contact with the birds or with contaminated materials and informing them about the nature of the disease;
- b) Isolating ill or exposed birds (*Bylaws Facility Practice Standards, Section 3-Facility General, Standard 9, Guideline g*) in a room where the air is exhausted directly (i.e., no recirculation);
- c) Implementing appropriate disease control procedures (i.e., cleaning followed by disinfection), preventative husbandry practices (appropriate cages and usage), and treatment;
- d) Wearing protective clothing, gloves, disposable surgical cap, and as well an appropriately fitted respirator (N95 or higher rating) when cleaning cages, handling infected birds, and performing a necropsy, as surgical masks may not be effective; and,
- e) When performing necropsies ensuring that the carcasses have first been wetted with detergent and water to prevent aerosolization of infectious particles.

Food Animals

- i. “**Q fever**” is a zoonotic disease caused by *Coxiella burnetii*; a microbe that can live for years in dust, soil, and the droppings of infected insects and spiders. Goats, sheep and cattle can carry the microbe in their flesh and body fluids (i.e., milk) with the highest levels occurring in the uterus, placenta, and birth fluids. Infection of small ruminants such as sheep and goats is considered enzootic within select herds of the Fraser Valley and regions of Vancouver Island; it is not necessarily widespread throughout the small ruminant farming community. Human infection may result in symptoms of an acute viral illness that typically lasts less than two weeks.

A pregnant woman, if possible, should not participate in the birthing of livestock or the disposal (by incineration or burial, as permitted) of any birthing product, including placentas, fetal membranes, and aborted fetuses. If she must assist, she should wear protective clothing, gloves and masks while working with the animal(s) (especially pregnant ones) and their reproductive products or secretions. Immediately afterwards, she should use an appropriate disinfectant on all contaminated surfaces. She should restrict her access to barns and laboratories used in housing potentially infected animals and utilize equipment such as masks to prevent infection from the airborne route in the facility.

<https://www.cdc.gov/qfever/>

- ii. *Listeria monocytogenes* is a bacterium found in soil, water and asymptotically infected animals such as cattle and sheep. Raw milk and foods made from unpasteurized milk, as well as raw and smoked fish, may contain *Listeria*. Pregnant women are about 20 times more likely than other healthy adults to contract listeriosis

and develop symptoms. About one-third of human listeriosis cases happen during pregnancy. Infected pregnant women may experience only a mild, flu-like illness; however, infection during pregnancy can lead to premature delivery, illness in the newborn, or stillbirth.

A pregnant woman can minimize her risk of acquiring infection by ingestion by wearing protective equipment and gloves when handling livestock and washing hands with an appropriate disinfectant after contact with soil or raw tissue. Additional information on *Listeria* and Listeriosis can be obtained from the Canadian Food Inspection Agency (CFIA) has a fact sheet at: <https://www.cdc.gov/listeria/prevention.html>

- iii. ***Chlamydophyllia abortus*** is a bacterial infection of ewes that can result in abortion (EAE). It can be transmitted to humans by contact with fetal fluids and handling of aborted, stillborn and newborn lambs. A pregnant woman should follow the advice listed for Q-fever.

4. Radiation

X-irradiation or X-ray is the most common source of radiation exposure. X-ray equipment in veterinary facilities includes fixed (=stationary), mobile (=portable) and dental. Although the radiation doses may be small and appear to cause no observable damage, the probability of chromosomal damage in the germ cells with the consequence of mutations does exist. These mutations may give rise to genetic defects, which may be passed on to the children of radiation workers.

The Workers Compensation Board (WCB), Occupational Health and Safety (OH&S), Part 7 (*Noise, Vibration, Radiation and Temperature*), section 7,21 (Reproductive Hazards) states:

- 1) *The employer must ensure that every worker who exceeds, or may exceed, the action level, ionizing radiation is fully informed of any potential reproductive hazards associated with exposure to ionizing radiation; and,*
- 2) *When requested by a pregnant worker or by a worker intending to conceive a child, the employer must make counselling available with respect to the reproductive hazards associated with exposure to ionizing radiation, [enacted by B.C. Reg. 382/2004, effective January 1, 2005.]*

Minimizing exposure to radiation from X-ray equipment is addressed in the BCVMA “*Radiation Safety Manual: Quality Management Plan*”. The following excerpt is provided:

“a female operator *must* be encouraged to notify her employer if she believes herself pregnant. A female operator *should* immediately notify her employer upon knowledge that she is pregnant, in order that appropriate steps may be taken to ensure that her work duties during the remainder of the pregnancy are compatible with the recommended dose limits as stated in Appendix II. In general, there is no reason to remove pregnant operators, or other pregnant staff members, from their duties of operating X-ray equipment. If a worker declares her pregnancy to the employer, her effective dose of ionizing radiation from an X-ray machine for the remainder of the pregnancy from external and internal sources *must* be limited by the employer to the lesser of 4 mSv, or the dose limit specified for pregnant workers under the Nuclear Safety and Control Act (see

WCB, OH&S, Par 7 (Noise, Vibration, Radiation and Temperature), section 7.19, Exposure Limits). The pregnant woman *must* not receive more than 1 mSv in the period from 8 to 15 weeks after conception. The external dose shall be measured at the abdomen, by wearing the radiation badge on the waistline **under** the lead apron. If before becoming pregnant, the average exposure of this worker is close to 4 mSv/year based on previous exposure histories, shorter wearing periods of the radiation badge than quarterly may be required to ensure that the dose limit is not exceeded.”

The National Dosimetry Service has a pregnancy information service:

<https://www.canada.ca/en/health-canada/services/healthy-living/your-health/environment/occupational-exposure-radiation.html>

Note that the Nuclear Safety Commission requirements, contained in the *Nuclear Safety and Control Act (Canada)*, apply to exposure by a pregnant woman from a nuclear substance.

Reference Material

1. Health Hazard in the Veterinary Practice, 3rd Edition, 1995.
2. Ontario Veterinary Medical Association (OVMA), Safety Handbook for Veterinary Hospitals, Dr. Diane McKelvey, 1997

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APPENDIX I
Continuation of Various Tasks During Normal Pregnancy
Up to the listed Weeks of Gestation*

JOB TASK	GESTATION
SITTING & LIGHT TASKS Prolonged more than 4 hours Intermittent	 40 40
STANDING Prolonged more than 4 hours Intermittent at more than 30 minutes per hour Intermittent at less than 30 minutes per hour	 24 32 40
STOOPING & BENDING BELOW KNEE LEVEL Repetitive at more than 10 times per hour Intermittent at 20 – 22 times per hour Intermittent at less than 2 times per hours	 20 28 40
STAIRS Repetitive at 4 or more times per 8 hour shift Intermittent at less than 4 times per 8 hour shift	 28 40
LIFTING Repetitive at less than 11 kg (25 pounds) Repetitive at 11 to 23 kg (25 to 50 pounds) Repetitive at more than 23 kg (50 pounds) Intermittent at less than 11 kg (25 pounds) Intermittent at 11 kg to 23 kg (25 to 50 pounds) Intermittent more than 23 kg (50 pounds)	 40 24 20 40 40 30

*Guidelines adapted from the American Medical Association on Scientific Affairs of pregnancy and work performance.

Please fill out this form and submit to Carol Costache at TRU

I have read the following documents: **(please initial beside each)**

- Expectations _____
- Academic Integrity and Plagiarism _____
- Forum Etiquette _____
- Pregnancy Policy _____

I agree to abide by the information presented in the above documents, during my participation in the Distance Animal Health Technology program offered by Thompson Rivers University.

Student Name printed

Student Signature

Date