

## **COURSE SYLLABUS**

### **Livestock Mixed Practice**

#### **CVM 7020 (Livestock I – Dairy)**

2 Credit Hours/2 week course

**Course Director:** Maisie E. Dawes, DVM, PhD, DACVIM

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**Phase II Director and Livestock Course Co-Director:** Wendell J. Cole, DVM, DACT

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**Clinical Field Liason Instructor:** Randall Anderson, DVM, MPVM

**Professional Role:** Field Veterinary Officer, The California Department of Food and Agriculture (CDFA)

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**Course Instructors:** **Dr. Norman LaFauce** – Lander Veterinary Clinic, Turlock, CA 95380; **Dr. Ken Fiser** – Lone Oak Veterinary Clinic, Visalia, CA 93292 ; **Dr. Mark Brandt** – Mid-Valley Large Animal Services, Inc., Turlock, CA 95380; **Dr. Fred Erickson** – Westside Veterinary Services, Los Banos, CA 93635; **Dr. Paul Cook** – Atwater Merced Veterinary Clinic , Merced, CA 95348; **Dr. Ann Ikelman** – Chino-Corona Veterinary Services; **Dr. David Formal** – Formal Large Animal Clinic; **Dr. Dan Drake** ambulatory practice, Chino, CA 91710; **Dr. Russell Dickson** – Bear Mountain Veterinary Services; **Dr. Nell Moore**, Sierra View Animal Health, Escalon, CA 95320.

\*Please note your contact upon arrival **will not** necessarily be the instructor. Contact information, including the preferred time of arrival, will be provided by the Phase II Director some time before the Sunday preceding the 2-week course.

#### **Course Time and Location:**

Times and locations will vary depending on practice location. **Livestock I** will take place in dairy practices in the Southern portion, as well as in the Central Valley of California (**please see above**). Students should plan to arrive at these remote locations on the Sunday evening prior to the first day in order to obtain the time and location to begin on Monday morning. Students should make themselves available to ride with practitioners during their normally scheduled appointments. This may require starting **as early as 3:00 a.m. OR finishing late in the day**. Both the students and their respective practitioner/preceptor, will work out a mutually agreed upon schedule to facilitate student participation in after hours emergency service. Additionally, **both** the students and their respective preceptor will need to work out a mutually agreed upon schedule to ensure that 50% of the student's time during the 2 week period, is protected for group and /or individually executed study/research activities. Each student is responsible for setting aside additional study time, if necessary, to **resolve their** individual learning issues. (See <http://www.westernu.edu/xp/edu/veterinary/time.xml> on Black Board.)

#### **Course Description:** (Course Purpose, aims/goals)

The goal of this course is to expose students to the practice of food animal medicine with specific focus on DAIRY PRODUCTION systems. Students may also be afforded the opportunity to be active participants in the diagnostic and therapeutic management of individual animal patients; including physical diagnoses, patient care and therapeutic problem-oriented decision-making. Emphases will be on herd health preventive programs, population medicine, record analysis, facility evaluation and animal welfare issues. Core curricular competences brought to the fore by the American College of Theriogenology – ACT- (April 2007) which broadly cover reproductive management and evaluation as well as surgical and obstetric techniques (see the list of Resources, below), will also be addressed. While in this clinical setting, students are expected to continue building knowledge in the basic sciences through self directed study, while developing an understanding of the clinical sciences through their experiences.

#### **Learning Objectives:** (Supporting The Course Purpose)

##### **At the end of this course, students will be able to:**

##### **A. Case Management, Patient Care and Client Education:**

1. Create a case record consisting of the following: Signalment, history, physical examination findings, problem list, differential diagnoses, clinical laboratory data, treatment plan, prescription and client communication.
2. Assist the practitioner in attending to the immediate needs of animals as well as develop, through self study, a diagnostic plan for the treatment of common diseases of dairy cattle (see below) not encountered during the course.
3. Be able to identify and communicate zoonotic risks to clients.
4. In all instances, self-study exercises should enable the student to understand and describe not only the clinical considerations, but also the anatomy, pathophysiology and other basic science issues relevant to each disease condition.

##### **Common conditions include but are not limited to:**

Abomasal displacement/torsion

Common causes of lameness  
Dystocia  
Hypocalcemia  
Ketosis  
Mastitis  
Metritis  
Retained placenta  
Ruminal tympany/distention  
Traumatic reticulitis

#### **B. Reproductive Management**

1. Examine the reproductive tract of a female bovid by rectal palpation, know the positive signs of pregnancy and know how to manipulate the estrous cycle pharmacologically.
2. Perform epidural anesthesia and state the indications which necessitate its use.
3. Assist the practitioner with the management of dystocia and delivery of a fetus.

#### **C. Dairy Management/Milk Quality/Udder Health**

1. Prepare the udder of a cow for the purpose of obtaining a milk sample to evaluate milk quality using the California Mastitis Test (CMT)
2. Prepare the udder of a cow with mastitis for the purpose of obtaining a milk sample for culture; determine the type of udder pathogen using simple laboratory techniques (KOH, Catalase, Coagulase, CAMP and esculin tests)
3. Describe proper milking procedure as it relates to udder health.
4. Design a colostrum management program.
5. State the components and characteristics of a total mixed ration (TMR, describing the contribution of each to scratch factor within the rumen; state the significance of the TMR to production and describe techniques used to evaluate it.
6. Describe the physiology behind the implementation of the principle of Dietary Cation-Anion Difference (DCAD) in the formulation of dry cow diets and its role in dairy cow health.

#### **D. Drug Usage and Prescription policies in Food Animals**

1. Describe the conditions/criteria that must be met to establish a Veterinarian-Client/-Patient Relationship.
2. Discuss the components of and/or create a valid label for dispensing veterinary prescription drugs to food animal clients.
3. State the public health implications such as pre-slaughter withdrawal or milk withholding times associated with drug use in food animals.
4. Describe the role of FARAD in Food Safety/Public Health.
5. Define the terms under which extralabel drug use is permitted in food animal patients based on the guidelines laid out by the AVMA, Animal Medicinal Drug Use Clarification Act (AMDUCA).

#### **E. Epidemiology, Animal Welfare and Biosecurity**

1. Use some basic economic concepts such as production principles, cost functions and economic choices, and decision analysis.
2. Describe the principle of clinical/field trials in veterinary medicine and explain how their results are applied to group situations; describe how individual animal data is collected, processed and analyzed to measure performance against target levels for culling, disease occurrence, growth, production, reproduction and profitability (This should include the use of at least one software program).
3. State the concepts and concerns of the relationship between livestock productivity and animal welfare.
4. State the components of a Biosecurity plan.

#### **Course Policies and Procedures:** (Attendance/Dress Code etc. – specific to course)

**Class attendance** – Attendance and participation are required in order to optimize the educational experience of all students. Students are expected to participate in the regularly scheduled activities of the practice. Failure to do so will require 'making up' for missed time, and may necessitate repeating the course during the summer or other off time. Both attendance and the level of student participation will contribute to each student's final grade for the course. In the event of an emergency situation that either interrupts the course or limits participation, the student should contact the course director and the clinical preceptor as soon as possible. (See contact information for course directors above). Information conveyed should include the nature of the emergency (general descriptions are allowed in the case of a deeply personal event), the anticipated period of absence (if known) and contact information while away. An Absence request form (see Year III Clinical Courses Handbook) must also be completed and submitted to the Clinical Preceptor and Phase Director (Dr. Wendell Cole) for approval signatures. Ms. Denisha Jenkins, Administrative Assistant for Clinical Programs, must also be informed to facilitate documentation in the College database.

**Students with special needs** - Students in need of disability accommodations are encouraged to contact the Center for Disability Issues & the Health Professions (CDIHP) office: 909- 469-5380). This office will coordinate reasonable accommodations for students with disabilities documented *prior to the beginning of the course*. Retroactive disability-related accommodations will not be granted.

**Professional behavior** – In addition to being preparatory for future interactions within our profession, professional behavior is conducive to learning and is expected of all course participants. Professional behavior includes but is not limited to tolerance of others' beliefs and opinions, arriving on time, and being prepared and appropriately dressed.

### **Equipment/Clothing**

1. Dress professionally. For this course, professional dress typically includes non-slippery, water impermeable boots or shoes with shallow treads (for easy cleaning and disinfecting), and coveralls. Pullover boots work well in dairy settings. **Steel toed shoes carry with them an inherent risk and are therefore not considered optimal.** Since clothing is likely to be easily soiled, in order **to maintain farm biosecurity**, you will **need to change into a clean pair of coveralls between calls**. Therefore, plan on several changes of clothing and coveralls during each week. If there needs to be a change to this general rule, it will be communicated by the Preceptor.
2. Other necessary implements include, surgical scrubs, a large animal digital thermometer (with string attached), stethoscope, pen light and hemostats.
3. Appropriate clothing that will protect from environmental extremes, dependent on the season of the year. This could include head wear (broad- rimmed hat or cap with a visor or bill), sunglasses, sunscreen; or forms of rain or cold weather protection (raincoats, jackets, warm up suits etc.)
4. Do not wear loose or dangling jewelry (rings, hooped or drop ear rings, loose bracelets and necklaces). These may get caught on equipment or machinery, animals' hair for e.g. Hair should always be worn in a manner to prevent exposure to entrapment and injury.
5. Fingernails should be trimmed to fingertip length to prevent patient injury during rectal examinations and allow adequate surgical scrubbing.
6. Computers and communication links to remote resources are recognized as being integral to the educational/research experience.

**Honor code** – Each student's behavior and conduct are expected to comply with the policies laid down by the University and College. The policy can be viewed on the WU website <http://www.westernu.edu/bin/registrarcatalog-2007-08-cvm.pdf>

### **Travel/Lodging**

The dairy practices are located long distances from the Western U campus, so students will be expected to live in temporary accommodations during this course. These accommodations may be provided by the practice site and if not available, will be arranged by the College. Lodging expenses at a local hotel/motel will be borne by the College (Lodging information is posted in Blackboard under course documents). Students will be responsible for any costs associated with travel within the locale such as to and from the site, as well as for meals.

### **Assessment:** (Grades/Rubric/Exam)

Student assessment is the responsibility of the course director but will incorporate an on-site clinical preceptor evaluation. Overall, the assessment will consist of the following:

#### **1. 15% Clinical Preceptor Evaluation of Third Year Students**

At the end of the first week of the course, each student is encouraged to meet with his/her Preceptor for a performance update using the red, yellow, green form (See **Appendix A; p. 6**). At the end of the course, the Clinical Preceptor will be asked to complete a check list addressing student participation, clinical skill competencies and professional conduct. The Clinical Preceptor will access the form on One45 (See **Appendix B; pp. 7 and 8**) – reproduced from page 171 of the 2007-8 Western University of Health Sciences CVM Clinical Courses Handbook). Likewise, students will be asked to assess each course site and will access the form on One45.

#### **2. 50% Summative examination (100 points)**

All course objectives are subject to assessment in the summative examinations. In addition some material may come from case logs and board exam review questions. The exam will be administered on campus during the assessment week following the course (**October 6 - 10, 2008; December 15 - 19, 2008; March 2 - 6, 2009 and May 11 - 15, 2009**).

#### **3. 20% Written assignments (20 points ; 16 points)**

Assignments for course 7020 (# 1 and # 2) are listed in **Appendix C**. They can be sent to the course director via e-mail (preferred), hard copy or fax, and will be evaluated using the rubrics on **pages 9 and 10**. All assignments must be submitted **no later than 8 a.m. Pacific time, Monday, following the completion of the course**. Assignment #1 is to be submitted as individual work. On the other hand, students may work together on assignment #2, submit **one** finished product and receive **a common grade**. Each rubric should be used as a guide during assignment completion.

#### **4. 15% Case Log/Clinical Skills Documentation (10 points)**

Students are expected to document cases seen during their course. This should be completed on-line **no later than 8 am Pacific time Monday following the completion of the course**). Failure to submit the case log by the deadline will result in an incomplete grade. Subsequent submission will result in a **10% deduction** of the final course grade. Please note, when performing the same procedure or treatment (eg. vaccinations/pregnancy evaluations) on several animals at the same site only one entry needs to be made – noting the number of animals seen. If variable, all **breeds** should

be noted. If an animal within that group is identified as having an additional problem significant/unusual findings (mummified fetus, cystic ovaries, abscess, conjunctivitis etc.) AND/OR requires additional treatment, please exclude that animal from the original count/entry and enter the case separately, stating that 'the identified problem' was noted in 'animal X' during 'the routine' procedure...' At least **three (3) logical differential diagnoses** and a **final or tentative diagnosis** -for the identified problem- **as well as subsequent treatment(s)**, should be entered in the appropriate column. Please be sure to complete this section as it provides you with a record of skills performed and is used by the College to document clinical skills acquisition for accreditation purposes.

#### **5. P/F Clinical Competency Assessment (7.5 out of 15 points)**

During the on-campus examinations (**October 6 - 10, 2008; December 15 - 19, 2008; March 2 - 6, 2009 and May 11 - 15, 2009**), students will demonstrate their competency in clinical skills as outlined under **Learning Objectives**.

#### **6. Student Course/Preceptor and Site Evaluation**

All students must complete preceptor/site and course evaluations upon completion of each CVM course. These evaluations are administered in the form of surveys and are conducted to gather student opinion and perception of course content and conduct, faculty and/or course director performance. The goal of this data is to improve instruction throughout the College curriculum, and survey outcomes assessment, an integral aspect of the College's internal review and accreditation process. Since this is a 'threshold' requirement, meaning, a student has not formally completed a course until his/her survey obligations are met, it is expected that each student will complete these surveys as scheduled. Failure to comply with survey obligations may result in the withholding of the final grade of the respective course. These evaluations are posted to each student's account in **one45**.

**Grading:** Grades will be assigned based on the cumulative score attained from the above assessment tools. The Grading scale will be as follows:

- A 90-100%
- B 80-89%
- C 70-79%
- D 65-69%
- U <65%

**Grading will not be on a curve. All scores of X.5 and above will be rounded up to the next whole number. Scores of X.499 and below will not be rounded up.**

#### **Course Schedule:**

See Time and Location above

#### **Resources:**

Blackboard will have various materials posted as reference. Several textbooks will also be useful; however this list is neither all inclusive nor exclusive. Students are reminded that learning in the third year continues to be self directed. Given the remote location or course sites, the following list is being suggested.

#### **Texts:**

1. Large Animal Internal Medicine, Smith, Elsevier;
2. Current Veterinary Therapy-FA Practice, Saunders;
3. Veterinary Medicine, Bailliere Tindall;
4. Techniques in Large Animal Surgery, Lea & Febiger;
5. Food Animal Surgery, Veterinary Learning Systems;
6. Large Animal Urogenital Surgery, Williams & Wilkins;
7. Current Therapy in Large Animal Theriogenology, Saunders;
8. Lameness in Cattle, Saunders; Herd Health, Saunders;
9. Diseases of Swine, ISU Press;
10. Goat Medicine, Lea & Febiger;
11. Medicine & Surgery of South American Camelids, ISU Press;
12. Clinical Biochemistry of Domestic Animals, Academic Press;
13. Livestock Feeds & Feeding, Prentice Hall;
14. Pathways to Pregnancy and Parturition, Senger, Current Conceptions, Inc.;
15. Veterinary Obstetrics and Gynecology, Roberts, Anatomy and Physiology of Farm Animals, Frandson, Blackwell Publishing;
16. Bovine Medicine, Andrews, Blackwell Publishing.
17. The California Department of Food and Agriculture (CDFA) on-line: <http://www.cdffa.ca.gov/>
18. The competencies identified by the ACT were based on information derived from two surveys, the results of which were published in *The J Vet Med Edu* 33:140-144, 2006; and *The J Am Vet Med Assoc* 229:514-521, 2006.

## **Additional Resource Material:**

### ***Searching for Primary Literature for use in research papers -***

#### **What is primary literature and why should you use it?**

Good laboratory write-ups often contain within the Introductions and Discussions (and sometimes the Materials and Methods), citations from the *primary* scientific literature. These articles present *new* data and the researchers' views on what their results mean. The use of such literature in the literature review process can provide compelling support for hypotheses *you* may present, as well as provide support for statements of fact that you may wish to establish. Good referencing of the *primary literature* is also useful in convincing the reader that your experiment has not been previously completed, and would truly offer data that is useful for addressing an important hypothesis. If nothing else, the proper use of *primary literature* indicates to your reader (and grader!) that you know of, and understand the relevant experimentation that has been published on a topic to date.

In the broad scheme of knowledge, *primary literature* is the most reliable because it has been peer-reviewed, and thus is least likely to suffer from egregious errors of fact, shady statistical procedures, and outrageously vile opinions.

Here is a general ranking of sources, starting with the most desirable (*truly* undesirable sources are in grey):

**primary articles in journals/periodicals (e.g., *Evolution*, *Cell*)**

**primary articles in books**

**review articles in journals/periodicals**

**book chapters**

**textbooks**

**articles in popular-press periodicals (e.g., *Natural History*, *Scientific American*)**

**articles in magazines (e.g., *Vogue*)**

**newspaper articles**

**laboratory manuals**

**product manuals**

**brochures**

**lecture notes**

personal communications (e-mail, telephone, etc.) with scientists

web sites, rumors, hearsay, voices in your head

outright fabrications

*The above article was found at Web Source: <http://www.swarthmore.edu/NatSci/cpurrrin1/litsearch.htm> and has been modified for this purpose.*

**Appendices: Student Evaluation Form, Assignments and Assessment Rubrics**

**Appendix A: This evaluation should be initiated and presented to the Preceptor by the student and serves to inform the student of their performance prior to final assessment.**



**WEEKLY FEED-BACK TO THIRD YEAR STUDENT**

COLLEGE OF VETERINARY MEDICINE  
WESTERN UNIVERSITY OF HEALTH SCIENCES

Student: \_\_\_\_\_ Preceptor: \_\_\_\_\_

Date: \_\_\_\_\_

Instructions: This is a simple form intended to provide weekly feed-back to students. Simply check the appropriate box which indicates the student's level of performance for each skill being evaluated.

**E v a l u a t i o n   o f   P e r f o r m a n c e**

| Skill being evaluated           | Adequate Performance<br>For 3 <sup>rd</sup> year student | Area of Concern-Needs<br>Improvement | Warning, insufficient at<br>this point, <u>risk of failing</u><br>(See Comments below) |
|---------------------------------|--|--------------------------------------|--|
| <b>Knowledge base</b>           | <input type="checkbox"/>                                 | <input type="checkbox"/>             | <input type="checkbox"/>   |
| <b>Application of knowledge</b> | <input type="checkbox"/>                                 | <input type="checkbox"/>             | <input type="checkbox"/>   |
| <b>Technical skills</b>         | <input type="checkbox"/>                                 | <input type="checkbox"/>             | <input type="checkbox"/>   |
| <b>Problem solving skills</b>   | <input type="checkbox"/>                                 | <input type="checkbox"/>             | <input type="checkbox"/>   |
| <b>Professional conduct</b>     | <input type="checkbox"/>                                 | <input type="checkbox"/>             | <input type="checkbox"/>   |
| <b>Communication skills</b>     | <input type="checkbox"/>                                 | <input type="checkbox"/>             | <input type="checkbox"/>   |

Comments (please elaborate on any "warnings"; use additional pages if needed):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Preceptor must fill out the "Low Performance Evaluation" form in one45 and the student must email the course director.**

**Appendix B: Clinical Preceptor End of the Course Student Evaluation Form**



Western University College of Veterinary Medicine Third Year DVM Program

To be completed by \_\_\_\_\_

On this form, you will be evaluating \_\_\_\_\_

For dates: \_\_\_\_\_ to \_\_\_\_\_

**Clinical Preceptor Evaluation of Third year Student**

**Livestock Courses– 2009 - 2010**

**Proficiency rating:** The following categories are used to evaluate student’s performance **at the end of the two-week course:**

**1-Rarely:** Very problematic, area of grave concern. Performance is consistently poor for a 3<sup>rd</sup> year veterinary student.

**2- Occasionally:** Performance needs improvement. Student has not yet gained personal command of the skill.

**3- Most of the time:** Performance of skill meets requirements: it is a good, solid performance, done most of the time as normally expected of a 3<sup>rd</sup> year student.

**4- Almost always:** Performance of skill often exceeds expectations, is consistently excellent (i.e. above average) for a 3<sup>rd</sup> year veterinary student

|  | N/A                   | Rarely<br>1           | Occasionally<br>2     | Most of the time<br>3 | Almost<br>always<br>4 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1) The student can handle and restrain the animal in order to perform a physical exam.                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2) The student can obtain an adequate history (as expected from a third year veterinary student)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3). The student was able to list/ refine differential diagnoses (as expected from a third year veterinary student)         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4) The student kept accurate records (SOAPs, forms, etc) when asked.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5). The student demonstrates a working knowledge of agricultural terminology and management systems.                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6) The student’s conduct was appropriate and professional.<br>(Dress, on time, language, concern for animal welfare, etc). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

|   |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 7) The student exhibited appropriate problem solving skills and approach.   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8) The student was involved, interested and self directed.  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 9) The student demonstrated appropriate communication skills (with doctors, staff, and possibly clients).   | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10) The student demonstrated and applied basic knowledge and technical skills for appropriate species and appropriate for his/her stage of development. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Comments

\* Did you have an opportunity to meet with this student to discuss their performance? Yes No

**Appendix C: Assignments and Assessment Rubrics**

**#1. Case Record (Medical Record)**

Each student will create a case record based on an actual case observed during the course. The record should include the history, patient’s signalment, the client’s primary complaint, the duration of the complaint and physical examination findings (For a guide, see *Chapt. 1 paragraph 1, Large Animal Internal Medicine, 3<sup>rd</sup> Edition; Smith, B, Elsevier*). As in PBL sessions identify a problem list, a rank ordered list of differential diagnoses (*hypotheses*), a list of rule-out test(s) (*plan(s)*) with a clear statement of justification for the one(s) pursued, the clinical laboratory results, the decided treatment plan, prognosis and outcome (if known). A sequential record of all client communication (dated and in keeping with the daily case progress) must be created and submitted along with the case record (**Note: Client communication begins on the day of case presentation, either during but typically after history-taking, physical examination and problem identification**). While resources may be made available on Blackboard, students are encouraged to actively research the topic through self-directed study and are also encouraged to discuss the case with the clinical site coordinator or other attending veterinarian. A grade will be assigned based on the criteria presented in the grading rubric below.

**Assessment rubric**

| Criteria   | Excellent (90 – 100 %)   | Proficient (79 - 89%)  | Poor to Average (≤70 - 78%)  |
|--|--|--|--|
| <b>Organization &amp; Structure &amp; Completeness (75%)</b><br><br><b>total points=12</b> | Clear, logical, easy to follow record, containing the components outlined in the assignment. All problems have been identified and addressed and the differential diagnoses are appropriately ranked. A list of potential diagnostic tests is included and the selected ones have clearly been explained / justified. Key laboratory findings are highlighted and the course of treatment and expected case prognosis are clearly stated. There is clear agreement between client communication and the case record. Reference is made to case outcome; if unknown, comments relative to predicted outcome are included. | Clear, logical, easy to follow record containing the components outlined in the question. The problem list is incomplete, but the potential diagnostic exercises are appropriate. The basis for testing is clear and key lab findings are appropriately highlighted. Treatment Course and expected case prognosis are clearly stated. There is clear agreement between client communication and the case record. Reference is made to case outcome; if unknown, comments, relative to predicted outcome, are included. | Record contains most of the requested components, but lacks clarity. The problem list is incomplete, but the potential diagnostic exercises are appropriate. The basis for testing lacks clarity. The significance of laboratory findings is not clearly stated. Treatment Course and expected case prognosis are not clearly stated. There is no record of client communication. No reference is made to case outcome; OR if unknown, no comments relative to predicted outcome are included. |
| <b>Vocabulary (5%)</b><br><br><b>total points= 0.8</b>                                     | The student’s use of scientific/medical terminology is accurate, and appropriate. Lay terminology is/are appropriately utilized and explained.   | The student demonstrates moderate but accurate and appropriate use of scientific/medical terminology. Lay terminology is/are appropriately utilized and explained.   | The student’s use of scientific/medical terminology is minimal and is occasionally inaccurate. Lay terminology is explained but is excessively utilized.   |
| <b>Grammar, Punctuation, Spelling (15%)</b><br><br><b>total points= 2.4</b>                | Rules of Grammar and punctuation are adhered to. No spelling errors.   | Assignment contains a few grammatical, punctuation and spelling errors.  | Assignment contains numerous grammatical, punctuation and spelling errors.   |
| <b>References (5%)</b><br><br><b>total points=0.8</b>                                      | References are complete and adhere to the requested format; Personal communication is appropriately noted.   | References are complete but fail to adhere to the requested format; Personal communication is appropriately noted.   | References are incomplete, and fail to adhere to the requested format or are absent; Personal communication is appropriately noted.  |

## #2. Colostrum Management

Design a colostrum management program for a large dairy (1000 cows or more). [Other species may be used **but only with** the course director's permission]. The assignment should contain the collection procedure(s), quality control methods (include handling and storage), method of administration (to the calf), method of compliance testing, client/calf rearing manager education, employee motivation/reward and monitoring of calf morbidity/ mortality. Provide **complete** references (including a **minimum of 3 peer reviewed primary literature resources** - see *Additional Resource Material, p. 5*) using the format outlined by The National Library of Medicine (NLM) - *AMA Manual of Style*<sup>(13)</sup> or the Uniform Requirements for Manuscripts Submitted to Biomedical Journals: [http://www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html). Failure to give proper credit to those whose work you used during the completion of your assignment constitutes PLAGIARISM, an example of **academic misconduct (see the CVM Honor Code)**. References should therefore be cited using EITHER any of the parenthetical formats (see [http://www.wisc.edu/writing/Handbook/DocAPACitations\\_Multiple.html](http://www.wisc.edu/writing/Handbook/DocAPACitations_Multiple.html)) OR any of the numbered references formats (see <http://www.wisc.edu/writing/Handbook/DocNumCitations.html>).

\* In-keeping with the self directed format of learning, students are expected to actively research the assignment. Although some resources will be made posted on Black Board students are also expected to utilize the practice's library as well as initiate discussions with the clinical site coordinator or attending veterinarian where necessary.

*Results will be used to determine if students need additional experiences that allow them to practice their problem solving skills.*

| Criteria   | Excellent<br>(90 – 100 %)   | Proficient<br>(79 - 89%)   | Poor to Average<br>(≤70 - 78%)  |
|--|---|--|---|
| <b>Organization and completeness (75%)</b><br><br><b>total points=15</b> | Clear, logical, easy to follow program. Contains all program elements including methods to ensure strategic client and employee education as well as evaluate compliance. The program also addresses means of employee motivation/reward. | Clear, logical, easy to follow program. Contains all program elements and methods to evaluate compliance. Fails to address elements pertaining to client/employee education, employee motivation. No reference is made to a system by which calf morbidity and mortality may be monitored. | Only some of the key components of a colostrum program are mentioned. The assignment also lacks clarity and organization. Appropriate mechanisms for client/employee education and employee motivation have been proposed, however the issue of monitoring calf morbidity/mortality has not been addressed. |
| <b>Vocabulary (5%)</b><br><br><b>total points=1</b>                      | The student's use of scientific/medical terminology is accurate, and appropriate. Lay terminology is/are appropriately utilized and explained.  | The student demonstrates moderate but accurate and appropriate use of scientific/medical terminology. Lay terminology is/are appropriately utilized and explained.   | The student's use of scientific/medical terminology is minimal and is occasionally inaccurate. Lay terminology is explained but is excessively utilized.  |
| <b>Grammar, Punctuation, Spelling (15%)</b><br><br><b>total points=3</b> | Rules of Grammar and punctuation are adhered to. No spelling errors.  | Assignment contains a few grammatical, punctuation and spelling errors.  | Assignment contains numerous grammatical, punctuation and spelling errors.  |
| <b>References (5%)</b><br><br><b>total points=1</b>                      | References are complete and adhere to the requested format; Personal communication is appropriately noted.  | References are complete but fail to adhere to the requested format; Personal communication is appropriately noted.   | References are incomplete and fail to adhere to the requested format OR are absent; Personal communication is appropriately noted.  |