

## COURSE SYLLABUS

### **Livestock Mixed Practice**

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

2 Credit Hours/2 week course

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

**Office Location:** Room 227, Veterinary Medical Center

**Contact Number:** (909) 706-3475/ (573) 808-3120

**Email Address:** [mdawes@westernu.edu](mailto:mdawes@westernu.edu)

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

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**Contact Number:** (909) 469-5664 office / (951) 640-8978 cell

**Email address:** [wcole@westernu.edu](mailto:wcole@westernu.edu)

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

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

**Email address:** [rjanderson@westernu.edu](mailto:rjanderson@westernu.edu)

**Course Instructors:** **Dr. Norman LaFauce** – Lander Veterinary Clinic, Turlock, CA 95380; **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. Nell Moore**, Sierra View Animal Health, Escalon, CA 95320.

\*Students please note: Your contact upon arrival **will not** necessarily be the Preceptor. Contact information, and expected time of arrival, will be provided by Dr, Martina Haupt-Beecher, Instructor and Clinical Field Liaison, during the week 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 Southern California and areas within the Central Valley of the state. Details will be provided in your contact information. 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 established hours of operation. This may require starting **as early as 3:00 a.m.** AND **/OR finishing late in the evening**. Both the students and their respective practitioner/preceptor will work out a mutually agreed 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 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 should demonstrate competence in the following:**

##### **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 dairy cattle diseases, as listed below, which were not necessarily encountered while with the preceptor/practitioner.
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 the other basic sciences relevant to each disease.

**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 how to manipulate the estrus cycle pharmacologically and why.
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. Describe and state the name of the cow-side test that is routinely used to screen milk quality in a herd of cattle; including a description of the steps needed to prepare the udder, prior to sample collection. What reagents if any, are utilized to perform this test? Comment on the working principle behind the test. What type of infection can this test be used to diagnose in lactating herds? What is the significance of this information to the dairy farmer?
2. Describe the adjunct tests (such as KOH, Catalase, Coagulase, CAMP and esculin tests etc. ) which are often employed when evaluating milk, including the reagents used and the significance of a 'positive' or 'negative' result for each of these tests?
3. Outline the steps necessary for aseptic sample collection from the udder of a lactating animal. State possible indications for pursuing this procedure.
4. Describe the laboratory procedures used to differentiate bacteria found in milk samples sent to a milk quality laboratory and why is it important to obtain this information?
5. Define the term 'bulk tank' and describe the various tests that are used to evaluate milk obtained from the bulk tank. What is the significance of each of these tests to farm productivity?
6. Describe/Outline a list of milking procedures; the goal being to help dairy clients maximize udder health and ensure the production of quality milk.
7. Describe the major components of a colostrum management program is it important to implement such a program in a calf-rearing facility?
8. State the components and characteristics of a total mixed ration (TMR), describing the impact of each on rumen scratch factor and how TMR are evaluated and its significance to milk production?
9. 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 in order to establish a Veterinarian-Client/-Patient Relationship.
2. State the public health implications such as pre-slaughter withdrawal or milk withholding times associated with drug use in food animals.
3. Describe the role of FARAD in Food Safety/Public Health.
4. Discuss the components of and/or create a valid label for dispensing veterinary prescription drugs to food animal (dairy) clients.
5. Define the terms under which extra-label 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. Identify how economic choices, such as treatment/culling, nutritional/animal grouping, dry period length and calf-rearing decisions made by dairy farmers, impact production costs/farm productivity.
2. Describe the principles of clinical/field trials in veterinary medicine, and explain how the results are applied to group situations.
3. Identify at least 3 software programs that are available to dairy farmers as well as their veterinary consultants and nutritionists, for the compilation and analysis of dairy herd production data. Explain how individual animal data is collected and later used to determine performance against target levels for culling, disease occurrence, growth, production, reproduction and profitability. Define the concepts of livestock productivity and animal welfare, and the relationship between the two.
4. List the components of a Biosecurity plan.

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

**Course Involvement** – Attendance and participation is mandatory, this in order to optimize the educational experience of all students. Students are expected to participate in the practice's regularly scheduled activities being always cognizant of information which is typically communicated by the preceptor. Failure to participate fully in these activities will require 'making up' for missed time, and may, at the discretion of the Course Director and Preceptor, 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 3<sup>rd</sup> Year Clinical Courses Handbook at <http://www.westernu.edu/xp/edu/veterinary/3rd.xml>) 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, **ONLY IF** documented *prior to the beginning of the course*.

**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 for engagements, and being prepared and appropriately dressed.

**Attire acceptable for this course:**

1. 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. 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.)
3. **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.
4. Fingernails should be trimmed to fingertip length to prevent patient injury, during rectal examinations, and to allow adequate surgical scrubbing.
5. Implements include: Surgical scrubs, a large animal digital thermometer (with string attached), stethoscope, watch, pen light and hemostats.
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 is 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/registrar/catalog-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 the 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 (maximum, 36 pts)**

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 **WEEKLY FEED-BACK FOR THIRD YEAR STUDENT** form (See **Appendix A; p. 6**). The information used at this sitting should be used to determine improvement measures for the upcoming week. At the end of the course, the Clinical Preceptor will be asked to complete an evaluation form which addresses student participation, clinical skill/ competencies, clinical prowess and professional conduct. The Clinical Preceptor will access the form on One45 (See **Appendix B; pp. 7 and 8**) – reproduced from page 40 of the 2008-9 Western University of Health Sciences CVM 3<sup>rd</sup> Year Clinical Courses Handbook; <http://www.westernu.edu/xp/edu/veterinary/3rd.xml>). Please note that the **WEEKLY FEED-BACK FOR THIRD YEAR STUDENT** form only bears a subset of the qualities which will be evaluated by your preceptor at the end of the course. Therefore it is advisable that you become familiar with both forms prior to the start of the course.

**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 each eight week block.

### **3. 20%: Two (2) Written assignments (20 points ; 16 points)**

Assignments for course 7020 (# 1 and # 2) are listed in **Appendix C**. They should be sent to the course director via e-mail, and will be evaluated using the respective rubrics on **pages 9 and 11**. 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 are encouraged to 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. Failure to complete assignments on time may result in up to a **15% point reduction**.

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

Students are expected to document ALL cases seen during their course. . 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 handled. 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...** A minimum of **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 columns. Please remember to identify the clinical competencies practiced/attained during these experiences using the drop down menu provided. This section will provides you with a record of skills performed and is used by the College to document clinical skills acquisition for accreditation purposes.

Reports should be submitted 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.

### **5. Pass/Fail Clinical Competency Assessment (A maximum of 9 out of 18 points extra credit will be awarded to each livestock course.)**

During the on-campus examinations, students will demonstrate their competence in clinical skills as outlined under **Learning Objectives**. Students who fail to attain at least 70% on their first attempt, will be required to repeat the sections missed during the examination given at the end of the subsequent block. **No points will be awarded towards the student’s final grade at that stage**.

### **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 delivery and content, and faculty and/or course director performance. The goal of this data is to improve instruction throughout the College curricula, 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 Course 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. Goat Medicine, Lea & Febiger;
10. Clinical Biochemistry of Domestic Animals, Academic Press;
11. Livestock Feeds & Feeding, Prentice Hall;
12. Pathways to Pregnancy and Parturition, Senger, Current Conceptions, Inc.;
13. Veterinary Obstetrics and Gynecology, Roberts, Anatomy and Physiology of Farm Animals, Frandson, Blackwell Publishing;
14. Bovine Medicine, Andrews, Blackwell Publishing.
15. The California Department of Food and Agriculture (CDFA) on-line: <http://www.cdfa.ca.gov/>
16. 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 results mean. The use of such literature in the literature review process can provide compelling support for hypotheses *presented by you*, as well as support statements of facts 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, and understand the relevant experimentation that has been published on a topic to date. In the broad scheme of knowledge, *primary literature* is 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/cpurin1/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 FOR THIRD YEAR STUDENT**

COLLEGE OF VETERINARY MEDICINE  
WESTERN UNIVERSITY OF HEALTH SCIENCES

Name of Student: \_\_\_\_\_ Name of Preceptor: \_\_\_\_\_

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

Instructions: This is a simple form intended to provide weekly feed-back to students. Please 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 For 3 <sup>rd</sup> year student	Area of Concern-Needs Improvement	Warning, insufficient at this point, <u>risk of failing</u> (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” signs evident when evaluating skill competence; use additional pages if needed):

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**Preceptor must fill out the “Low Performance Evaluation” form in one45 and the student must email the completed form to the course director.**

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



Western University College of Veterinary Medicine Third Year DVM Program

Name of Preceptor \_\_\_\_\_

Name of student \_\_\_\_\_

Period being evaluated (*please give beginning and ending dates for course time*) From: \_\_\_\_\_ to \_\_\_\_\_

Clinical Site: \_\_\_\_\_

### Clinical Preceptor Evaluation of Third year Student

#### Livestock Courses– 2009 - 2010

**Proficiency rating:** The following rating scale/terms, as defined, are to be used to evaluate student's performance **at the end of the two-week course:**

**1-Rarely:** Very problematic aptitude level, 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 represents 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 1	Occasionally 2	Most of the time 3	Almost always 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. (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 is expected to create a case record based on an actual case observed during the course, using the Problem Oriented Veterinary Medical Record (POVMR) approach. 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. Select A SINGLE problem and create, 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 (if available), 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 included in the submission (**Note: Client communication may begin even on the day of case presentation, typically after history-taking, physical examination and problem identification, or following resolution of the patient's problem-in this case-and may pertain either to the patient at hand or/and its herd mates**). While resources may be available on Blackboard, students are encouraged to discuss the case with the clinical Preceptor or/and other attending veterinarians; as well as to actively research the topic. See **Appendix D** for the required components of a well-written POVMR. A grade will be assigned based on the criteria presented in the grading rubric below.

### **Assessment rubric**

<b>Criteria</b>	<b>Excellent (90 – 100 %)</b>	<b>Satisfactory (70 - 89%)</b>	<b>Poor to Average (&lt;70%)</b>
<b>Organization &amp; Structure &amp; Completeness (75%)</b>  <b>total points=12</b>	The case record consistently demonstrates between <b>85 to 100%</b> of the criteria listed below. In addition, clinical problem solving and reasoning are appropriate given the available medical information. Mistakes if present, have minimal to no impact on the care or management of the patient. Case prognosis is clearly stated. Reference is made to case outcome; if unknown, comments, relative to predicted outcome, are included.	The case record/SOAP commonly demonstrates the following criteria. Clinical problem solving and reasoning are usually appropriate given the available medical information. Mistakes may have the potential to have an adverse impact on the care or management of the patient. Reference is made to case outcome; if unknown, comments, relative to predicted outcome, are included.	The case record <u>fails in several ways to</u> demonstrate the criteria listed below. <u>(&lt;68% of the list has been included.)</u> Alternatively, the case record/SOAP frequently demonstrates inappropriate clinical reasoning and problem solving. Mistakes have the potential to have a significantly adverse impact on the care and management of the patient. No reference has been made to case outcome; OR if unknown, no comments relative to predicted outcome have been included.
<b>Vocabulary (5%)</b>  <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>  <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>  <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, <del>and</del> fail to adhere to the requested format or are absent; Personal communication is appropriately noted.

## **POVMR CRITERIA:**

Correct/Appropriate medical terminology has been used.

Patient problems have been clearly identified, verified and well defined.

Patient problems have been prioritized based on diagnostic utility and clinical importance.

Patient problems have been modified (refined/redefined or combined) and tracked based on available medical information, where feasible.

All the significant, normal and abnormal historical and medical information relevant to the problem being SOAPed have been identified.

Relevant medical and historical information have been identified as being either 'Subjective' or 'Objective'.

Each problem that has been identified in the patient has been localized to an organ or organ system.

The type of disease processes (DAMNIT-V) which may be causing the patient's problems have been identified.

A prioritized and well justified list of differentials which is based on available medical and historical information pertaining to the problem being SOAPed has been created.

The diagnostic significance of available subjective and objective data relevant to problem being SOAPed has been explained.

The subjective and objective data related to the problem being SOAPed have been correlated to case management decisions.

The 'Plan' for the selected problem includes treatment, diagnostic evaluation and client communication.

A prioritized diagnostic plan for the problem being SOAPed is based on available Or expected medical information and clinician's assessment of the problem.

A prioritized treatment plan is outlined and each treatment decision has been explained and justified.

The route, frequency and amount (weight in milligrams [mg] OR International Units [IU] etc.) of each medication administered has been recorded along with the respective dosage (for instance, mg/kg OR IU/kg etc). Medications have been identified by their generic name. In the event that a drug is identified by its trade name, the generic name has also been recorded, parenthetically.

Rate of fluid administration or the volume of oral fluids administered is recorded as milliliters per kilogram per day (ml/kg/day).

## #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 (90 – 100 %)	Proficient (79 - 89%)	Poor to Average (≤70 - 78%)
<b>Organization and completeness (75%)</b>  <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>  <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>  <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>  <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.