

COURSE SYLLABUS

Equine Practice I

CVM 7030

Credit hours 2/2 week course

Revised: 8 July 2009

Note: syllabus is subject to change. The most current version will be posted on Blackboard under Course Documents

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Course Location and Schedule

Location

Site I:

Chino Valley Equine Hospital (CVEH)
2945 English Place
Chino Hills, 91709

Site II:

West Coast Equine
4310 Sand Canyon Rd
Somis, CA 93066

Course Description: (Course Purpose, aims/goals)

This third year course provides supervised clinical education in hospital based equine care. The students will have an opportunity to work alongside high quality community based equine clinicians. The students, through their initiative, will be active participants in the diagnostic and therapeutic management of equine patients and continue to develop problem-oriented decision processes. The students will develop skills in the management of primary care patients, medical, surgical and emergency issues as well as gaining exposure to the economics of the equine practice.

Learning Objectives: (Supporting The Course Purpose)

At the end of the course, the student should be able to:

- Complete an accurate history and physical examination that is efficient and aides in clinical management
- Establish problem lists

- Handle and restrain animals in a safe and humane manner
- Demonstrate patient assessment skills in an integrated manner
- Recommend a thoughtful and accurate diagnostic and therapeutic plan for typical and atypical clinical problems seen during the rotation
- Have knowledge of and manage common diseases seen in the practice setting
- Develop diagnostic protocols for common complaints and presentations of horses
- Be able to evaluate clinical findings and determine the next steps in clinical case management

Practice case load, individual patient needs and the short time of exposure may not afford each student the opportunity to perform these tasks. However, this does not dismiss the student from the responsibility of developing these skills.

Specific Activities

Knowledge of the means to complete the following skills is essential. Again, clinical practice, clinical caseload and individual patients may preclude a student from performing all of these events, but that does not preclude a student from acquiring the knowledge base to complete these skills. Students should be able to address these skills in study groups and discussion.

I. Data gathering and interpretation

- A. Obtain history, perform physical examination, and evaluate the environment
 1. Gather information from client, trainer, herd manager, etc., by asking appropriate questions and using interpersonal skills to:
 - a. clarify concerns, presenting problems, and expectations
 - b. identify possible epidemiological problems
 2. Determine the status (normal/ abnormal) of the animal(s) and/or environment by:
 - a. observation and physical examination
 - b. medical or production record evaluation
 3. Record, organize, and store pertinent information in a legible and orderly system of medical records to promote retrieval of information
- B. Develop a problem list, and a differential diagnosis list
 1. Correlate clinical signs or abnormalities with organ systems
 2. Formulate a complete problem list and differential diagnosis list(s), and determine the need to collect additional information
 3. Recommend appropriate procedures to the client, trainer, herd manager, etc., for obtaining specific information about the problem(s)
 4. Order or perform appropriate diagnostic procedures to further define the problem(s)
 5. Interpret collected information
- C. Establish an accurate working or final diagnosis or conclusion

II. Health Maintenance and Problem Management

- A. Identify and Evaluate Prevention, Treatment, and Management Options
 1. Develop a plan of action by assessing the following:
 - a. expected outcome
 - b. feasibility of a successful outcome
 - c. urgency
 - d. client expectations
 - e. economic considerations
 - f. humane considerations including pain management
 - g. ethical and legal implications
 - h. environmental and public health implications (including food safety issues)
 - i. professional abilities, resources, and facilities
 2. Communicate case management options and prognosis to the client, trainer, herd manager, etc., including prevention, treatment, and husbandry alternatives
 3. Obtain assistance through information retrieval, consultation, and/or referral
- B. Implement Plan of Action
 1. Obtain informed consent as needed from client or authorized representative
 2. Protect animal and human health and the environment by doing the following:

- a. order or perform appropriate tests
- b. apply appropriate epidemiological procedures
- c. comply with applicable regulations (government, show, etc.)
- d. complete reports required for the legal movement of animals
- 3. Perform preventive and/or therapeutic procedures (surgical, medical, etc.)
- 4. Communicate to the client or staff procedures that will optimize compliance with the treatment plan
- 5. Monitor the effectiveness of preventive and/or therapeutic measures
- 6. Advise the client on relevant additional issues (e.g., nutrition, behavior, genetics, husbandry, production management and performance, environment)
- C. Assess Outcomes
 - 1. Evaluate successful or unsuccessful interventions by
 - a. reviewing existing data
 - b. collecting additional information
 - c. assessing client compliance
 - d. validating working diagnoses
 - e. modifying therapeutic and preventative plans as needed

III. Professional Behavior, Communication, and Practice Management

- A. Conduct oneself in a professional, ethical, and legal manner
- B. Promote economic viability within the veterinary profession to benefit both the client and the practitioner
- C. Develop positive ties with the professional community
- D. Advance the knowledge base of the veterinary profession
- E. Advance the respect and stature of the veterinary profession
- F. Pursue educational opportunities to enhance continued personal and professional development
- G. Work productively and efficiently with colleagues and support staff
- H. Communicate effectively with colleagues and staff
- I. Maximize available practice resources
- J. Evaluate practice methods to enhance productivity
- K. Develop time management skills
- L. Apply triage principles to clinical activities
- M. Educate staff and public in proper animal care and health
- N. Address client concerns in empathetic and understandable manner
- O. Assist with grief management and respond supportively to client crises and staff concerns
- P. Preserve and protect the human animal bond
- Q. Enhance the economic viability of livestock operations

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

Attendance: Attendance and participation in the course is required. If the student is unable to participate in the scheduled clinic day the practice contact and site coordinator must be notified as well as Dr Wendell Cole and Dr. Bertone. Other stipulations have been made elsewhere in this document.

Professional behavior: Professional behavior is conducive to a learning environment 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 for cases during the course.

Student dress and equipment: Students will use summer tan coveralls as indicated with leather shoes that have a waterproof heel and sole. The student will provide their own stethoscope, penlight, digital thermometer and small hemostat. Further dress code particulars are identified in the clinical manuals provided by CVEH and WCE.

Honor code: In compliance with the university and college requirements and recommendations.

Students with special needs – Students seeking accommodations based on disabilities should contact the Center for Disability Issues & the Health Professions (CDIHP) office (TEL: 909-469-5380) to coordinate reasonable accommodations for students with documented disabilities *prior to the beginning of the course*. Retroactive disabilities related accommodations will not be granted.

Assessment: (Grades/Rubric/Exam)

Numeric and letter Grade correlation (see table 1).

Grade	Score
A	90 to 100
B	80 to < 90
C	70 to < 80
D	65 to < 70
U	< 65

There is no rounding of grades. Therefore, as an example, if a student's semester score is 89.99, the final grade remains a B.

Students will be graded by scoring percentages as indicated in Table 2. Each item in Table 3 must have a passing grade (≥ 70) to complete the course satisfactorily. Any item score in Table 2 that is graded as < 70 will be unsatisfactory. Remediation opportunities will be at the discretion of the course director and evaluated on a case by case basis. It is prudent for the students to take the posture that remediation will not be available for this course, unless specific hardships are identified and documented to the course director's satisfaction.

Scoring Domains (see table 2).

Item	% final grade	Framework	Assessment
Submission of completed case logs, OAPs	Threshold	Day sheets for cases seen at CVE and student submission of clinical site evaluation at the end of the course in a timely manner	See Table 4 below.
Clinical site evaluation	40%	Clinical site course.	Assessment will be by clinical faculty at sites. See rubric in table 5.
Examination	60%	Active Clinical examination	This assessment will be based on abilities of the students to address clinical cases via physiologic and patho-physiologic mechanisms universal across veterinary species and those specific to horses. Diagnostic modalities available for evaluation of horses, their practical use, rationale and assessment will be essential. See scoring rubric in appendices and the Learning objectives.

Timeliness of submissions and individual work

ALL EMAIL CONTACT IS TO BE THROUGH THE WESTERN UNIVERSITY SYSTEM. In other words, USE YOUR WESTERN University Email Address (Student Name@westernu.edu [e.g., jbertone@westernu.edu]). No other contact will be accepted as official nor can we help you with those if they fail. All electronic mail, to be assured as official, must be transacted through the Western University server. Email address mistakes and other electronic issues will not be an excuse for failure of or timely assignment delivery. Extenuating circumstances may be reviewed and decisions made at the discretion of the course director. It is the student's responsibility to anticipate user, electronic, digital and any other failure or other similar issues when making assignment or any other submission or request. Failure in these issues does not discount student tardiness in assignment submission. All communication sent to students via the course director and others will be assumed to have been read in 24 hours after it is sent. So you must keep abreast of your email contacts. The Western University server can assess if you have received email. If you have any difficulties, you must contact the course director as soon as possible.

The case log (and any other written work that is requested) is to be the student's own individual work, not a group project. It must be maintained and submitted by individual students. The case log should be a representation of the cases in the barn and outpatients. Ten to 12 cases is reasonable.

The due times for performance products (weekly case logs and OAPs) will be 10:00 PM on the mid-block Friday (Day 5) and 10:00 PM on the second Friday (Day 12) of the rotation. Electronic copies will be submitted to the course director.

The accuracy and submission of electronic information is the student's responsibility. Computer, network, and any other issues that impede timely submission will not change submission deadlines and failure to submit assignments will lead to failure of the associated sections in Table 2, or possibly the entire course.

1. Case log

Students will develop a case log for each patient that they are exposed to during the course. The case log will be maintained and submitted on-line.

2. OAP

This should be a summary and of no more than 1 page in length.

The details of these submissions will be presented to you at site orientation which occurs day 1 at 7:30 AM.

The submission deadline for all assignments (Case Log, OAP, and any other added assignments) will be by the last day of the course and earlier if requested by the course director or the clinical preceptor or designee of the clinical preceptor and/or the course director. Failure to do so will lead to no credit provided for that portion of the final grade. The submission and receipt of assignments is the responsibility of the student. Electronic difficulties or any other excuse for failure of timely submission will not be accepted.

Students will produce 1 defined and detailed OAP per week based on that case. The OAP should include patho-physiologic mechanisms, a differential list, and plans for diagnosis and management. The management plan should include possible pharmaceutical intervention, including dosages, ADE, and advantages and disadvantages of these options.

3. Student assignment to interns

Students will be assigned to interns within the practice. Each morning when students are in the active clinical course, the students will assist and participate in assessment and treatment of cases with the interns as supervisors and assessors of these skills and achievements. The interns are equipped with a list of clinical skills and events to which the students should be exposed, perform or participate.

The focus of this course is for students to develop a diagnostic plan, assess findings, and manage common equine clinical presentations. As examples, exercise intolerance, lameness, weight loss, abdominal pain, etc. A team approach to learning will be essential for you to accomplish this skill. Develop your own scenarios and discuss the approaches to these cases, and information resources to address, as was done in Problem Based Learning.

Active Clinical Examination (see Appendix II for scoring rubric)

Preparation for this examination will follow a PBL format and IT IS STRONGLY recommended that you do so as a group effort. The active clinical examination will be based on clinical material presented in the clinic, but will NOT be those specific cases. The case material will be used to introduce broad areas of concern in equine practice. As an example, a horse with Clostridial enteritis, will make the work up of diarrhea, differentials, patho-physiologic mechanisms, management and treatment fair game for the examination.

To compensate for the seasonality of equine clinical case-load, a group of cases scenarios (presented on Black Board under course documents for this course) will broaden your learning issues. These cases may or may not be available, as the caseload at the facility dictates. Work up cases seen in the hospital and the case material presented on Black Board. The Black Board case presentations may simply be a photograph with short history. Follow through on the cases and use these to stage your own postulated scenarios and develop your own hypotheses and learning issues.

Example

You are presented with a digital image or a clinical live case of 9 week old foal with a history of poor weight gain

and nasal discharge of 4 weeks duration.

PBL discuss what you have been given:

What are your hypotheses?

What is the mechanism of weight loss?

How does this relate to nasal discharge?

What do you want to do (Plans)?

Ask more history, examination at a distance, physical examination and further diagnostics.

You may choose to perform a CBC

It is late, but an IgG may be warranted

Ultrasonographic and radiographic evaluations of the thorax may be considered.

Trans-tracheal wash cytology, culture and sensitivity.

In the live clinical cases, seen in the hospital, you will have the details of the case available to you. However, regardless of what is found and how those cases are managed, discuss in group what findings would change your diagnosis and to what and how does that change prognosis and management. There may be black-board cases that will require you to postulate the changes expected and how they will affect your further choices. This is best performed as a group effort.

So, presented with the case above, if you were to see gram+ pleomorphic coccobacillus on cytology, what would your thoughts be? How does it change if you see gram+ cocci in strings versus doublets? If you saw multifocal alveolar patterns on the radiographs, what are your thoughts and how will you proceed. It is up to your group to identify the scenarios and work them through, in detail.

Active Clinical Examination Example

The active clinical examination will be presentation of case material to the group of examinees which will include all the students from blocks in that quarter. The examination will be given each quarter during the examination week. An example is presented below. The case and time allotted will vary.

All students from Blocks 1 to 4 will meet in the assigned examination room.

Step I: An image of a 12 year old horse with weight loss is projected.

Question 1: Design and rationalize your diagnostic plan for this case. You have 10 minutes to do so.

Individual students will perform this task and submit their work. This section will be graded for completeness, thoughtfulness and prioritization of issues related to the scenario. Just putting down everything you know will likely not work. Prioritization is essential.

Step II: Group discussion will follow. The discussion will focus on thoughts and ideas of all the students in an open format with Dr. Bertone. This will round out the information in the case.

Step III: Question 2 will be presented: You have requested serum laboratory data. Significant findings include hyperphosphatemia, hypoalbuminemia, a creatinine of 7.2 mg/dl, and a BUN of 64. You did not request a urinalysis. However, SG was 1.012. What are your thoughts and where do you wish to proceed and rationalize your processes?

Individual students will perform this task and submit their work. This section will be graded for completeness, thoughtfulness and prioritization of issues related to the scenario. Just putting down everything you know will likely not work. Prioritization is essential.

Step IV: Group discussion will follow. The discussion will focus on thoughts and ideas of the group with Dr. Bertone. The scenario above is merely an example, and the examination will be flexible in its presentation.

Multiple scenarios can be used. The examination will be based on past case logs and the master case list managed by Dr. Bertone and the clinical site, and will likely include presentations for colic, neurological disorders, lameness, foal and adult respiratory disease, diarrhea, and other important clinical scenarios.

Clinical competency examination threshold event

Clinical competency will be assessed in this threshold event. This will be an oral examination with the course

director and will focus on

- General topical anatomy landmarks for procedures and examination
- Perineural analgesia of the distal limbs (ie from tibia and radius to carpus)
- Landmarks and procedures for arthrocentesis
- Upper airway endoscopy
- Lame horse evaluation

Course Schedule:

The two week scheduled course is conducted at Chino Valley Equine Hospital and West Coast Equine. One half of the time will be dedicated to clinical exposure and one half the time will be dedicated to student centered learning. Scheduled university holidays do not apply to the practice schedule, unless stated by the course director, or the clinical preceptor.

All students are expected to be at the clinic Monday through Friday at 7:30 AM. At that time, students will assist interns with in-house patient examinations, treatments, and attend and participate in the Monday journal club at 8:30 AM if one is scheduled (CVEH) or Friday intern presentations (WCE). All students will also attend morning rounds Monday through Friday. Other required activities may also occur as may be indicated by the clinical preceptor, instructors and course director. Students arrive Monday through Friday prepared to perform clinical work. The learning issues and course objectives must be attended to by the student in the off-clinic time which includes Saturday and Sunday. If for some reason, a student must miss a week day of clinical floor time, then that weekday absence must be performed on the weekend with the approval and acknowledgement of the site coordinator and course director.

All absences (floor or study time) must be requested by the student and submitted to the course director and site contact 48 hours in advance. A voice mail and an email request must be submitted to both the course director and site contact. Policies for excused absences are found in the Clinical Courses and Rotation Handbook. Any student assigned to, but not found or on the clinic premises may be charged with misconduct unless the student advises the course director by email or telephone 48 hours in advance of the absence..

All students will participate in rounds each day.

Site I:

Six students will be divided into 2 groups of 3 and scheduled as indicated in Table 3. Students will alternate 1 clinical exposure day and 1 group self directed learning day. Shaded areas in the table indicate the days individual students will be on the clinic floor. The clinic time schedule for Groups 1 and 2 are indicated in Table 3. A shaded day indicates that students from that group will be in the clinic assigned to an intern for that entire day. The non-shaded day indicates the student group should gather at the clinic, attend rounds and then stay at the clinic library or be somewhere on the clinic site. Clearly, you are not sequestered to the library and as interesting cases or procedures occur, you are certainly welcome to observe. The students on the floor should in fact send someone to the library to retrieve the self-study time group when interesting events are occurring.

Table 3. Course schedule

	Week	Group	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Day			1	2	3	4	5	6	7
	1	1							
		2							
Day			8	9	10	11	12	13	14
	2	1							
		2							

Site II:

All students will be in the clinic with the doctors in the morning and then will spend the afternoon in student directed learning on the clinic site, and will participate in evening rounds.

Resources:

Cases may be available on blackboard. Dr. Bertone will inform you when these are available.

Appendices: (Detailed Schedules/Assessment rubrics/University, College Information/Forms/Surveys etc.)

Appendix I

This is a partial list of diseases, management and other areas of interest you may wish to consider for future study, or as an aid in this specific course

General principles management techniques

- Anesthesia, general
- Fluid therapy
- Neuroanatomic diagnosis
- Lameness diagnosis
- Rational Antimicrobial therapy

Problem solve diagnose and manage

- Abdominal pain - surgical disease
- Acute blood loss
- Anemia
- Bacterial/viral pneumonia
- Botulism
- Dysphagia
- Epistaxis
- Neonatal Foal Abnormalities
- Neurological gait abnormalities
- Ocular disease-surgical
- Osteoarthritis (septic, nonseptic)
- Performance Problems-non-musculoskeletal
- Pyrexia
- Respiratory Noise
- Sweating Abnormalities
- Urine and Urination Abnormalities

Specific topics

Cardiovascular system

- Atrial fibrillation
- Congestive heart failure
- Diaphragmatic Flutter
- Ruptured Chordae

Gastrointestinal disease

- Clostridial infections-GI
- Colic (surgical)
- Duodenitis/proximal jejunitis
- Endotoxemia
- Acute colitis / diarrhea
- Gastrointestinal ulceration
- Chronic diarrhea/granulomatous enteritis
- Hepatic disease / biliary disorders
- Hernias
- Peritonitis
- Potomac horse fever
- Septicemia

Immune disorders

- Combined Immunodeficiency
- Failure of Passive transfer
- Neonatal isoerythrolysis
- Purpura hemorrhagica

Musculoskeletal system

- Developmental orthopedic disease
- Disruption of suspensory ligament
- Enteroliths
- Osteoarthritis
- Osteochondrosis/subchondral cysts
- Septic tenosynovitis

Neoplasia

- Cutaneous lymphosarcoma
- Melanoma

Squamous cell carcinoma

Nervous System

Cervical vertebral malformation

Protozoal myeloencephalitis

Equine herpes myelitis

Ocular system

Corneal ulcer-surgical management

Urinary system

Patent urachus

Renal failures

Ruptured bladder

Appendix II: Scoring Rubric for the active clinical examination

Scoring Rubric; VM 7060 Equine I

StudentID _____ Part _____

Critical Thinking – Problem Solving – 80 % of examination score

Facts – The student must detect the abnormalities to formulate an accurate initial understanding of the problem				
All abnormal facts identified and stated correctly	At least essential abnormal facts identified and all stated correctly	Some essential abnormal facts not identified; those stated are correct	Some essential abnormal facts not identified; incorrectly stated; benign non-fact inserted	Many essential abnormal facts not identified, incorrectly stated, misleading non-fact inserted
Ideas – Investigation of the problem can only succeed if the student is considering ideas ultimately consistent with the diagnosis and solution, especially in terms of pathophysiological mechanisms.				
Thorough list of rule-outs considering all reasonable major etiologic categories for data available; demonstrates insight and specific knowledge.	Adequate list of rule-outs considering all reasonable major etiologic categories for data available; some evidence of insight or specific knowledge	Modest list of rule-outs are reasonable for data available but lack insight or specific knowledge	Missing some reasonable rule-outs but considers all major etiologic categories; some rule-outs not reasonable for data available	Missing major rule-outs or fails to consider major category consistent with data; most rule-outs not consistent with data available
Plans – Specific prioritized pragmatic investigative action plans are the basis for efficient diagnosis and solution. Plans should be appropriate to the stage of the investigation.				
Thorough, detailed investigative plans associated clearly with all defined ideas; prioritized and pragmatic	Adequate plans associated clearly with all defined ideas; some displaced in priority or not pragmatic	Modest plans some stated in generalities not clearly associated with defined ideas;	Generalities not specific and not clearly associated with defined ideas	Major action plans of significance to the investigation not defined
Issues – The identification of significant scientific, socio-economic and ethical issues demonstrates the student’s appreciation of the knowledge, skills and behaviors needed to respond to the scenario with sensitivity to multiple perspectives.				
Thorough list of issues showing full and insightful perspective	Adequate list of issues showing good appreciation of the problem	Modest list of issues; some aspects not appreciated	Restricted list of issues; several important aspects not appreciated	Inadequate appreciation of the issues involved in the scenario.
A	B	C	D	U
% equivalent 100	85	75	65	0

Written Communication – 20% of examination score

Communication – While creating the PBL lists in this exam the student is expected to use concise and accurate notation to permit the grader to appreciate his/her thought processes.				
Notations were orderly, legible and clearly demonstrated the student's thought process and logic	Notations were effective but present a few problems with order, legibility or thought process and/or logic	Notations were effective but present multiple problems with order, legibility or thought process and/or logic	Inadequate or illegible notations; multiple problems with order, legibility or thought process and/or logic	Failed to communicate most thought process and/or logic
Terminology – While creating PBL lists in this exam the student is expected to use medical terminology correctly and at a level consistent with the content of the curriculum				
Appropriate terminology demonstrating expert use of accurate scientific vocabulary	Appropriate terminology; usually adequate use of accurate scientific vocabulary	Some use of lay terminology where scientific terms were expected; some misuse of terms; minor misspellings	Inadequate use of precise terminology; embarrassing misuse of terms; significant misspellings	Failed to use appropriate terminology; vocabulary errors would result in miscommunication and injury to the patient
Reads and follows directions – At each stage of the IVPACT the student is expected to read and follow directions. Failure to do so results in chaos and distress for the student and others.				
All written exam directions apparently read and understood; no problems noted with compliance	One instance of written directions apparently not read or not understood	Two instances of written directions apparently not read or not understood	Inadequate compliance with direction resulted in chaos or distress	Gross neglect of written exam directions
Scoring Code (all above represented as one Written Communication score)				
A	B	C	D	U
% equivalent 100	85	75	65	0