

Course Number and Name: Applied Clinical Reasoning (SPRING 2012) CP6220
Department: Department of Clinical Reasoning and Therapeutics
Course Hours: Lecture: 2 Lab: 0 Total: 30
Course Credits: 2

Contact Information:

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Course Materials:

Required Readings / Texts and or Articles:

Textbook: From Symptom to Diagnosis: An Evidence-Based Guide, 2nd ed. Stern SD, Cifu AS, Altkorn D. McGraw Hill Lange 2010.

Suggested Readings / Texts:

Course notes and texts from the following courses:

Clinical Reasoning for Manual Therapists, Jones M, Rivett D, eds. Butterworth Heinemann 2004; pp 403-417.

Edvance 360 Address: <http://edvance360.com/txchiro>

Course Packs / Notes: PowerPoint presentation notes made available via Edvance 360.

Course Description:

This course will build upon the skills learned in Developing Clinical Reasoning Skills. There will be greater complexity in case presentations, using accumulated basic and clinical science knowledge with particular emphasis on material from Physical Examination and Diagnosis; Imaging Interpretation-Appendicular Focus; Adjusting Procedures II; and Adjusting Procedures III. In addition to recognizing common presentations, formulating differential diagnoses and a final diagnosis, the students will begin to develop appropriate adjustive and/or other therapeutic intervention strategies.

The use of standardized patients in both teaching and assessment enhances the learning process.

Course Prerequisites: Developing Clinical Reasoning Skills; Pediatric Diagnosis; Obstetrics and Gynecology; Senior Adult Health and Wellness; Imaging Interpretation-Appendicular Focus

Course Co-requisites: Orthopedics I; Adjusting Procedures IV; Clinical Neurology; Internal Diagnosis I; Physical Medicine and Rehabilitation; Nutrition II

CCE / TCC Competencies:

Communication (TCC)
Diagnosis (CCE)
History Taking (CCE)
Neuromusculoskeletal Examination (CCE)
Physical Examination (CCE)
Diagnostic Studies (CCE)
Chiropractic Adjustment or Manipulation (CCE)
Nutritional Counseling (TCC)
Physical Therapeutic Procedures (TCC)
Recordkeeping (CCE)
Evidence-based Practice / Research (TCC)

Learning Outcomes:

Perform a patient interview and physical examination that elicits the necessary information to develop a probable list of differential diagnoses.

Recognize the relevant aspects of a patient's clinical presentation that influence the differential diagnosis list.

Incorporate basic and clinical science knowledge to formulate a diagnosis based on acquired patient information.

Apply basic concepts of clinical reasoning, epidemiologic data, and knowledge of test capabilities to determine appropriate diagnostic investigations

Apply knowledge of adjustive procedures, nutrition, and therapeutic modalities to formulate a basic therapeutic management plan.

Learning Objectives:

By the end of this course, students should be able to:

Conduct and record a focused patient history, review of systems, social and past medical history on a standardized patient that elicits information which identifies risk

factors, co-morbidities, and underlying pathology that may influence the differential diagnosis list.

Correlate findings from a patient's history, physical examination, and imaging studies with neuroanatomical and biomechanical structure and function and underlying pathophysiologic processes.

Recognize key findings from a patient's history, physical examination, and imaging studies that support or refute a differential diagnosis.

Correlate key findings from a patient history with relevant epidemiological data to stratify differential diagnoses.

Use known likelihood ratios and predictive values associated with examination procedures to support or refute a differential diagnosis.

1. Synthesize key clinical information to develop accurate diagnoses from an appropriate list of differentials.
2. Describe basic nutritional recommendations based on a patient's clinical presentation and diagnoses.
3. Describe appropriate adjustive procedures based on a patient's clinical presentation and diagnoses.
4. Select the appropriate therapeutic modality and accurately describe parameters for use based on a patient's clinical presentation and diagnoses.

Teaching Philosophy:

I believe the fundamental elements that foster a positive learning environment for Applied Clinical Reasoning include the student's willing participation in the process of discovery, development of critical thinking skills, and conduct that exemplifies professionalism.

My goal is to develop each student's potential to reason through clinical reasoning scenarios, recognize errors in judgment and choose the correct course of action. I use a variety of teaching methods, including PowerPoint lectures, history and exams performed on standardized patients, team-based learning, reading assignments, post-encounter questions, and classroom discussion to accommodate various learning styles. To best benefit from this course, students should complete reading assignments prior to class so that discussion can promote higher learning.

Clinical reasoning is a problem-solving process that enhances the development of clinical thinking and decision making skills in patient care. In this course, the objective is to use knowledge accumulated in Basic and Clinical Science courses through the fifth trimester and including selected sixth trimester courses as a foundation for sound clinical judgment. This course relies on standardized patients (SPs) and case-based learning to achieve outcomes and objectives. The majority of clinical scenarios for this course are presented as Standardized Patient experiences. Students will elicit a history, develop a list of differential diagnoses, perform physical examination

procedures, and identify a primary and secondary diagnoses based on accumulated information during the SP encounter. Students will also offer nutritional advice, select appropriate therapeutic modalities and chiropractic adjustive procedures based on each case scenario. Students will have four opportunities to use their clinical reasoning skills during individual SP encounters. These encounters will have both a formative and a summative assessment. Prior to the encounter, students will be provided with a list of specific learning objectives. Following each encounter, students will answer post-encounter questions related to the case. Additionally, students are expected to improve their clinical reasoning skills by actively participating in team-based learning using unfolding simulated cases using WebSP. Students will read case scenarios and answer questions based on the information given. After answering a question, the student will move to the next screen where additional information is given along with follow-up questions.

Student Responsibilities:

Attend the entire class; be prepared, attentive and respectful of others.

Take notes during the class. Class discussion will be a substantial part of the material on which you are tested.

Each student is expected to actively participate in a positive manner in case discussions and facilitate productive group discussion by active listening, asking probing questions, and/or offering new information.

This course emphasizes active learning. Before class, you should complete all reading assignments and think critically about the materials for the past and coming week.

Turn in all assignments on time. Group case assignments are completed during class and due at the end of class. Late assignments will not be accepted.

Prepare for quizzes as well as midterm and final exams.

Should a student decide to withdraw from this course, he or she is responsible for completing the appropriate paperwork and meeting the appropriate deadlines.

Course Content and Outline:

Week	Component	Location
1 01/11	Introduction; Review of clinical reasoning concepts	Lecture room
2 01/18	Unfolding Cases 1-2	Lecture room
3 01/25	Unfolding Cases 3-4	Lecture room
4 02/01	Standardized Patient Encounter 1 Post-encounter assessment	Assessment Center
5 02/08	Review/Discussion	Lecture room
6	Unfolding Cases 5-6	Lecture room

02/15		
7 02/22	Midterm	Midterm Lecture room
8 02/29	Standardized Patient Encounter 2 Post-encounter assessment	Assessment Center
9 03/07	Review/Discussion	Lecture room
10 03/21	Standardized Patient Encounter 3 Post-encounter assessment	Assessment Center
11 03/28	Review/Discussion	Lecture room
12 04/04	Standardized Patient Encounter 4 Post-encounter assessment	Assessment Center
13 04/11	Unfolding Cases 7-8	Lecture room
14-15 04/18	Final Exams	Final Exams TBD

This is a tentative outline and may be altered for the benefit of the class. The 15 week trimester is divided into 13 weeks of course work followed by 2 weeks of finals.

Grade Method and Scale:

TCC Grading Scale

A = 90 - 100

B = 80 - 89

C = 70 - 79

F = below 70

Your final grade is your final grade. Fractional scores will be rounded to the nearest whole number. If you score an 89.5 you will get an "A" in the course. If you score an 89.2 you will get a "B" in the course. Please do not ask if you can do extra credit to raise your score.

Examples of Assessment Tools for Clinical Reasoning:

- Standardized Patient encounters
- Multiple choice questions (midterm, final, SP post-encounter)
- Extended matching questions (midterm, final)
- Key features questions (SP encounters)

Method of Assessment:

Midterm Examination

Points

28

(Multiple choice, extended matching, key features)	
Final Examination (Multiple choice, extended matching, key features)	28
4 SP Encounters – Assessment Center PEPs (7 pts) (Multiple choice, fill-in, short answer, patient feedback)	28
Unfolding Cases (8x2 pt)	16

There are no make-ups for missed Standardized Patient encounters.

Only one unfolding case may be missed during the trimester; the make-up for any missed unfolding case must be completed within three days of the absence.

Assignments turned in late will receive the equivalent of 15% reduction in score.

POLICY INFORMATION:

Ten (10) points, equating to one letter grade, will be deducted from your total score for unprofessional behavior, including cheating, abusive language or aggressive behavior when addressing the instructor or classmates.

Attendance Policy:

Regular and punctual attendance of all scheduled classes and laboratories is expected. A student is subject to academic penalty if absences exceed 10%. Absences exceeding 20% subject a student to dismissal from a course. Three incidences of tardiness constitute one absence. If justifiable cause can be shown for the absenteeism, the student may be permitted to make up missed assignments and maintain enrollment in the class.

Applied Clinical Reasoning comprises two hours of lecture per week for a total of 30 hours. A student is subject to academic penalty if absences during the term exceed 3 hours (3 class sessions). Absences exceeding 6 hours during the term (6 class sessions) subject a student to dismissal from this course. Walking in late constitutes a tardy. Three tardies constitutes one absence. Leaving class early constitutes an absence. Wandering in and out of class will result in a loss of participation points concomitant with the time absent from class.

Missed Examinations:

Students must notify faculty before missing any examination. If an examination is missed for good and sufficient reason and the student has notified the faculty member in advance, a make-up examination may be given subject to a fee of \$40.00. The fee for the make-up examination is a minimum of \$75.00 if a standardized patient is

required for the exam. Additional required standardized patient hours may increase this \$75.00 minimum fee. All intra-term examination must be made up prior to final examinations. Missed final examinations must be made up within the first week of the next semester. A student may be allowed a maximum of two missed examination dates for good and sufficient reason per trimester. These two missed examination dates are for all enrolled courses in a trimester, not for each individual course. Any request for additional make-up examinations will require documentation substantiating the absence and must be approved by the Dean of Academic Affairs.

Cellular phones: Electronic communication devices are to be turned off or placed in silent mode when in the classroom. These devices are **NOT** allowed to be on your person during testing situations. Cellular phones may **NOT** be answered during class time without prior permission from the faculty member. Texting or e-mailing is **NOT** allowed during class time. All devices will be confiscated if used during class and the student will lose 5% of their final total grade per offense.

Computers: The use of computers is not permitted during lectures, case presentations, discussions of case presentations, reviews of standardized patient encounters, midterm or final exam. Use of laptop computers is permitted during group activities associated with evidence-based investigations.

For specific procedures on how each policy is enforced see the Student Handbook.

Dr. Ramcharan reserves the right to change the syllabus as deemed necessary.