



Foundations in Clinical Medicine II

MEDC 216.18
YEAR 2 TERM 3

 **COURSE SYLLABUS**
2017/2018



UNIVERSITY OF SASKATCHEWAN
College of Medicine
MEDICINE.USASK.CA

Foundations in Clinical Medicine II – Course Overview

COURSE DESCRIPTION

The Foundations in Clinical Medicine Courses run over Terms 2, 3, and 4 and incorporate the eleven human body systems modules. The three modules explored in the Foundations of Clinical Medicine II (Term 3) Course include: Kidney & Urinary Tract, Musculoskeletal Medicine and Neurosciences. Major vertical themes will be emphasized. Students will be prepared to enter their clerkship where they will expand and deepen their knowledge and skills in these areas.

COURSE PREREQUISITES

A student must have successfully completed Foundations of Clinical Medicine I (MEDC 126.18) or be conditionally promoted and engaged in a program of remediation for the MEDC 126.18 course as approved by the Student Academic Management Committee prior to the start of the Foundations of Clinical Medicine II course.

OVERALL COURSE OBJECTIVES

Building on their knowledge from MEDC 115.18 of normal anatomy, histology and physiology, and their knowledge from MEDC 126.18, students will learn to care for patients with common and/or urgent medical conditions by acquiring and applying knowledge and clinical reasoning skills to:

- Explain the pathogenesis and pathophysiology of the subject conditions, with reference to the divergence from normal anatomy, histology and/or physiology. (*Medical Expert*)
- Generate reasonable differential diagnoses and management plans. (*Medical Expert*)
- Select and interpret appropriate investigations. (*Medical Expert*)

In addition, each discipline-specific module in the course will also have its own specific module objectives and individual session objectives of learning.

COURSE CONTACTS

Course Chairs: Dr. Jennifer Chlan - jen.chlan@usask.ca (306) 966-6557
Dr. Jackie Perrot - jackie.perrot@usask.ca (306) 966-6138
Dr. Kelsey Brose (Co-Chair Assessment) - kelsey.brose@saskcancer.ca (306) 655-1483

Administrative Coordinator: Cheryl Pfeifer - cheryl.pfeifer@usask.ca (306) 966-6138

COURSE SCHEDULE

The Foundations in Clinical Medicine II Course is organized in 3 modules running sequentially on specific assigned days. Session schedules for each of the modules will be posted on One45.

All information relating to this course is available in **One45**. Please check One45 **DAILY** to ensure that you have the most current schedule information.

COURSE DELIVERY

Students will learn through a variety of methods, including:

- Large group sessions including lectures, interactive discussions, case-based problem solving
- Interactive small group learning sessions
- Independent self-directed reading and exercises

COURSE MATERIAL ACCESS

Course materials are available on One45. The syllabus, forms, and other useful documents will be posted there. In some modules, BBlearn (Blackboard) will be used for submission of assignments.

RESOURCES

It is strongly recommended that you use the following resources (or similar general texts) as references for the Foundations course. Relying on class notes alone will not typically be sufficient to meet your learning objectives. Individual Modules will have additional specific recommended or required resources.

The texts listed below are all available as free e-books through the Health Sciences library <http://libguides.usask.ca/c.php?g=16462&p=91000>. If you need assistance finding these texts, contact your Health Sciences librarian.

1. A general medicine text such as Harrison's Principles of Internal Medicine by Kasper et al (ISBN: I 978-0-07-1802161 for e-book). Edition: 19.
2. A general surgical text such as Sabiston Textbook of Surgery by Townsend C (ISBN 978-1-4377-1560-6). Edition: 19 or Current Diagnosis and Treatment – Surgery by Doherty G (ISBN 978-0-07-179211-0). Edition: 14.
3. A general pediatrics text such as Nelson Essentials of Pediatrics by Marcdante, Karen J (ISBN: 978-1-4557-5980-4). Edition: 7 or Rudolph's Pediatrics by Rudolph C. et al. (ISBN: 9780071790376). Edition: 22.

In addition, you should be regularly referring to your Principles Course texts to assist you with basic sciences content in the Foundations Course:

Physiology

WF Boron & EL Boulpaep (2012). Medical Physiology. Updated Second Edition. Saunders Elsevier.

Histology

Wheater's Functional Histology by Barbara Young, Phillip Woodford and Geraldine O'Dowd (2013) [ISBN 978-0-7020-4747-3]

OR

Histology: A Text and Atlas (2006) by M.H. Ross and W. Paulina [ISBN 978-0-7817-7200-6]

Embryology

Larsen's Human Embryology by Shoenwolf, Brauer [978-0443-06811-9]

Anatomy - One of:

Essential Clinical Anatomy by Moore KL, Agur MR [987 1145 1187496]

Grant's Atlas of Anatomy [978 0781796125]

Netters Atlas of Human Anatomy [9781455704187]

Pharmacology

One of: Goodman & Gilman's Manual of Pharmacology and Therapeutics (2nd Edition). Eds. By Hilal-Dandan & Brunton.
Or Principles of Pharmacology: The pathophysiologic Basis of Drug Therapy. By David E Golan (3rd Edition)

Microbiology

Microbiology and Infectious Diseases – Infectious Diseases: A Clinical Short Course Frederick Southwick Lange [13: 978-0071789257] Edition: 3

Immunology

Immunology - Understanding the Immune System: A Framework for First Year Medical Students (located on MEDiC) (Required)

Pathology

Pathology - Robbins & Cotran Pathologic Basis of Disease, 9e (Robbins Pathology) [Hardcover] Vinay Kumar MBBS MD FRCPath (Author), Abul K. Abbas MBBS (Author), Jon C. Aster MD PhD (Author) Publication Date: July 9, 2014 [ISBN 978-1455726134] Edition: 9

COURSE ASSESSMENT OVERVIEW

Course Component	Component Requirement	Weighting in Final Mark
Kidney and Urinary Tract Module	70% on module	33.33%
MSK Module	70% on module	33.33%
Neurosciences/Neurology Module	70% on module	33.34%
Course Total Mark		100%
Final Integrative Exam	60% on exam	-

COURSE POLICY FOR SUCCESSFUL COMPLETION & REMEDIATION

For successful course completion for the purposes of promotion, students must achieve a minimum grade of 70% in each of the three modules within the Foundations II course (Kidney and Urinary Tract, MSK, and Neurology Modules). Students must also achieve a minimum grade of 60% in the end-of-term integrated examination for Foundations II. The end of term integrated examination will include both multiple choice questions and clinical decision making problems. Students who are not promoted as a result of being unsuccessful on the course will receive a grade of “F” on their transcripts.

A student’s grade for each module will be determined at the end of each module and is based on the weighted cumulative average of all graded assessments within each individual module.

The requirements for successful completion of the Foundations II Course are listed below. Please note that students must meet the overall Term 3 promotion standards in order to be promoted to Term 4 (see Student Information Guide):

- A) Students will be considered to have successfully completed the Foundations II Course if they have achieved a minimum 70% average grade in each of the three modules and a minimum 60% grade on the end-of-term Foundations II integrated examination.
- B) Students are required to complete all assignments, quizzes, and examinations in each of the Foundations modules, as well as the integrated examination. A mark of 0% will be given for any missed assignment, quiz, or examination, unless otherwise arranged as per the College of Medicine Attendance Policy and Deferral Policy.
- C) Students who do not achieve the required 70% average grade in any of the three modules or a 60% grade in the end of term integrated examination will be allocated grade deficit points, which are weighted based on the percentage grade below the pass standard for either the modules or end of term integrated exam (see Table 1 for grade deficit point allocation rubric). Students accumulating 2 or more deficit points at any point during the course will be deemed to be experiencing academic difficulty. The severity of academic difficulty will be based on the weighted grade deficit assessment. Students in academic difficulty will be required to meet with a course sub-committee of at least 2 people (made up of Course Chairs(s); relevant Module Director(s); Year Chair (or designates) to discuss ways to improve academic performance. The goal of such a meeting is not meant to be punitive, but should be student-centered, and focused on the success and well-being of the student. With any further accrual of deficit points, the student will be required to again meet with the course sub-committee.
- D) Students who have failed a module or the integrated exam may be offered remediation. The determination of eligibility for any remediation will be based on the number of accumulated weighted grade deficit points (see Table 1 for grade deficit point allocation rubric). Students will be offered remediation up to and including the point where they have accrued a maximum of **three (3)** grade deficit points.
- E) The Module Director retains the right to determine the specific type of remediation needed for each individual student. This remediation may be in the form of additional assignments, assigned readings, meetings with the module director and/ or supplemental examinations as determined by the module director and/ or course chair(s). The remediation timeline will begin once the student has been notified of failure in a module or the integrated final. A remediation plan will be arranged between the module director and student, which will be carried out from the beginning of the remediation timeline until the date of the supplemental exam.

- F) Supplemental examinations will **only** be scheduled after the final exam period in December. Students required to remediate modules will be informed of the specific supplemental examination dates. Students should anticipate that supplemental exams for all but the final module of the term will be held the week immediately after final exams, and that supplemental exams for the final module of the term and the Integrated exam will be held mid-January.

Supplemental examinations will be provided on dates other than those specified for each module and for the integrated exam **ONLY** in exceptional circumstances (such as personal illness, bereavement, etc.), and will be adjudicated by the Course Sub-Committee in consultation with Assistant Dean Academic. Exceptions will not be made for personal travel, and students may be required to adjust personal travel arrangements. Decisions regarding academic outcomes will be adjudicated by the Year 2 (Term 1) Promotions Committee and the Student Academic Management Committee.

- G) A maximum of **one (1)** supplemental examination per module will be allowed, regardless of the number of GDPs accrued. As well, students will only be allowed to write **one (1)** supplemental examination for the Integrated Exam, regardless of the number of GDPs accrued. Students who have been unsuccessful in any supplemental examination will be deemed unsuccessful in the Foundations II course. Further decisions regarding academic outcomes will be adjudicated by the Year 2 (Term 2) Promotions Committee and the Student Academic Management Committee.
- H) If a student fails a mandatory assignment in a module, a supplemental assignment will be written as arranged between the student, module director and/ or course chair(s). Supplemental assignments must be completed by the date set by the Module Director with the latest possible due date being two weeks after the end of the module; however, alternative earlier due dates may be arranged between student and module director.
- I) Students who have **accrued four or more** grade deficit points in Foundations II will be considered to have been unsuccessful in the Foundations II Course and will NOT be offered further remediation or supplemental assignments and/ or examinations as per usual course policy. Further decisions regarding academic outcomes will be adjudicated by the Year 2 (Term 2) Promotions Committee and the Student Academic Management Committee.
- J) If a failure of a supplemental examination occurs during or after the final examination period, this decision as to whether any additional remediation/supplemental assessment will be allowed will be adjudicated by the Promotions Committee and the Student Academic Management Committee.
- K) Success in any supplemental assessment will be accorded a maximum grade equivalent to the minimum requirement for that component of the course (70% for a Module and 60% for the end-of-term integrated exam).
- L) Grade deficit points will not appear on the student's transcript, nor are they transferred to the next Foundations course.

Students who are eligible for supplemental examination will be contacted by the Module Director and should arrange to meet with the Module Director or designate to discuss educational issues and develop a learning plan.

Table I: Grade Deficit Point Allocation

	Overall grade achieved in module before remediation or grade achieved in Supplemental Examinations		
	Average < 70% and ≥ 60%	Average < 60% and ≥ 50%	Average <50%
Kidney and Urinary Tract Module	I	II	III
Musculoskeletal Module	I	II	III
Neurology Module	I	II	III
Integrated Examination	N/A	II	III

I: one grade deficit point; II: two grade deficit points; III: three grade deficit points; N/A: not applicable

UNDERGRADUATE MEDICAL EDUCATION ASSIGNMENT SUBMISSION POLICY

Any assignment submitted after 23:59 SK time on the specified date is deemed late (unless otherwise specified).

All due dates or timelines for assignment submission are published in the student course syllabus^[1].

A late assignment may still be submitted up to three consecutive calendar days (72 hours) from the original deadline for that assessment. The assignment must be submitted to the appropriate year Administrative Coordinator in Saskatoon, or the Educational Consultant in Regina for years 1-2. Years 3-4 must submit to the Rotation Coordinator. The student, if submitting a late assignment that is deemed to be at or above the pass mark for that assignment will receive the pass mark for the assignment. If it is assessed as below the pass mark, the student will receive the actual grade assigned for the assignment.

Any late assignments not submitted by 23:59 on the third day will receive a mark of 0%. After this period, all mandatory assignments must still be submitted, or the student will be deemed to be missing a course component, which will result in an incomplete course. Subsequent academic consequences will be determined at the promotions committee meetings.

In addition to the consequences specified herein, students submitting mandatory assignments late should anticipate a meeting to discuss professionalism, which may result in associated documentation.

All requests for a deferral of an assignment due date must be received a minimum of 72 hours prior to the deadline. All such requests must be sent to the Course Director or Rotation Coordinator and copied to the relevant Administrative Coordinator. The course director, in consultation with the year chair and appropriate course/module/rotation director will make a final decision and notify the student of the outcome. Exceptional, unforeseen circumstances will be considered on an individual basis as above.

CITATION FORMAT

Unless otherwise specified by the course or module director, the expected citation format is that of the International Committee of Medical Journal Editors (ICMJE). Examples of this citation format are available at www.nlm.nih.gov/bsd/uniform_requirements.html

RECORDING OF THE LECTURES

Most lectures will be recorded and posted to the course Blackboard site under Course Materials. However, each lecturer reserves the right to choose whether or not their lectures will be recorded. Lecture recordings are not intended to be a replacement for attending the session but to enhance understanding of the concepts.

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^[1] Blackboard routinely updates their systems on certain Wednesday evenings. In the event that Blackboard is down for scheduled maintenance or due to technical difficulties, assignments are to be submitted by 0900 the following morning.

Foundations in Clinical Medicine II – Module Syllabus

This section of the course syllabus will describe the specific objectives, requirements and expectations, and assessment procedures for each module within the Foundations in Clinical Medicine II Course.

MODULE 1

Kidney and Urinary Tract

MODULE DIRECTORS

Nephrology: Dr. Dave Reid

Email Address: dave.reid@usask.ca

Phone Number: 306-934-3300 (x-2)

Office Location: 434-230 Ave R S.

Office Hours: 08:00-16:00 Hours

Urology: Dr. Trustin Domes

Email Address: trustin.domes@usask.ca

Phone Number: 306-966-5678

Office Location: Undergraduate Surgical Education B413 HSB

Office Hours: 08:00-16:00 Hours

MODULE DESCRIPTION

Through an integrative approach, students will describe the normal structure and function of the kidney and urinary tract and contrast this with the pathogenesis and pathophysiological derangements responsible for renal and urinary tract clinical conditions. Using clinical reasoning skills, students will apply their knowledge to select and interpret appropriate investigations, generate reasonable differential diagnoses and develop management plans to treat renal and urinary tract conditions commonly seen in generalist practice.

MODULE OBJECTIVES

By the completion of this module, students will be able to:

- Describe the embryological development, normal anatomical structure and physiological function of the kidney and urinary tract organs (Medical Expert)
- Differentiate the normal renal and urinary tract structure and function with the pathogenesis and pathophysiologic mechanisms that lead to the following core presenting patient issues: (Medical Expert)
 - Elevated Serum Creatinine and/or Urea
 - Electrolyte and acid/base abnormalities
 - Hypertension
 - Hematuria
 - Proteinuria
 - Lower Urinary Tract Symptoms and Obstruction
 - Upper Urinary Tract Symptoms and Obstruction
 - Urinary Tract Infection
 - Urinary Tract Trauma
 - Urothelial, Renal, or Prostate Cancer
 - Voiding Abnormalities (enuresis and incontinence)
 - Acute and Chronic Renal Insufficiency
 - End-Stage Renal Failure
- Elicit and synthesize the history, physical examination, laboratory and imaging data to develop a differential diagnosis of the core presenting patient issues (as above) (Medical Expert)

- List, interpret and calculate (when applicable) appropriate resource-conscious laboratory and imaging findings which are key in the process of exclusion, differentiation and diagnosis of common and urgent renal and urinary tract conditions (Medical Expert)
- Formulate a patient-centered management plan for diagnosed common and urgent renal and urinary tract conditions, including non-pharmacological, pharmacological and surgical treatment options (Medical Expert)
- Critically evaluate the evidence for applying complementary alternative medical approaches to the patient with common renal and urinary tract conditions (Medical Expert)
- Discuss different preventative health strategies as they apply to conditions of the kidney and urinary tract (Medical Expert)
- Elicit and synthesize the history, physical examination, laboratory and imaging data to develop a differential diagnosis of the following pediatric conditions: (Medical Expert)
 - Hypertension
 - Proteinuria
 - Hematuria
 - Acute and Chronic Renal Insufficiency
 - Enuresis and Incontinence
 - Hydronephrosis
 - Urinary Tract Infection
 - Foreskin Abnormalities
 - Cryptorchidism

Note: Students should also refer to overall Foundations II Course objectives within this syllabus. Additionally, for each module, detailed individual lecture and session objectives will be posted in One45. Please take care to review in advance. Lecture recordings for Flipped Classes will be available on Blackboard.

MODULE SCHEDULE

All information relating to this course is available in One45. Please check One45 **DAILY** to ensure that you have the most current schedule information. Please also refer to the course site on Blackboard for schedules and lectures. Pre-recorded lectures for flipped classroom sessions will also be available on Blackboard.

RECOMMENDED RESOURCES

Campbell-Walsh Urology

Brenner & Rector's: The Kidney / [edited by] Barry M. Brenner

Primer on Kidney Diseases / editor, Arthur Greenberg; assoc. editors, Alfred K. Cheung ... [et al]

Clinical Physiology of Acid-Base and Electrolyte Disorders / Burton David Rose, Theodore W. Post

Acid-Base and Electrolyte Disorders: a companion to Brenner & Rector's The Kidney / Thomas D. DuBose

Oxford Handbook of Urology / John Reynard, Simon Brewster, Suzanne Biers

Problem Based Urology [electronic resource] / [edited by] Paolo Gontero, Roger Kirby, Culley Carson III

Lecture Notes: Urology 6th Edition / John Blandy, Amir Kaisary

Fluid, Electrolyte, and Acid-Base Physiology: A Problem-Based Approach / Mitchell L. Halperin, Kamel

Additional On-Line Resources:

Acland's Video Atlas of Human Anatomy <http://aclandanatomy.com/>

American Urological Association Guidelines <http://www.auanet.org/education/aua-guidelines.cfm>

AnatomyOne <http://www.anatomyone.com/anatomyone-a-new-generation-of-anatomy-thought-leaders/>

Bates Visual Guide to Physical Examination <http://batesvisualguide.com/>

Canadian Urological Association Guidelines http://www.cua.org/guidelines_e.asp
 Edinburgh Renal Unit Website <http://www.edren.org/pages/edreninfo.php>
 Electrolyte and Acid-Base Workshop <http://www.learnphysiology.org/sim2/>
 National Kidney and Urologic Disease Information Clearinghouse <http://kidney.niddk.nih.gov>
 Nephrology on Demand https://blog.ecu.edu/sites/nephrologyondemand/?page_id=6949
 Renal Physiology in Real Time <http://www.biologymad.com/resources/kidney.swf>
 Surgery 101 Podcasts (Urology Sections) <http://surgery101.libsyn.com/?search=urology>

MODULE DELIVERY

Students will learn through a variety of methods, including:

- Large group didactic, interactive and case-based problem solving sessions
- Interactive small group learning sessions, including dialysis unit visit and patient encounter
- Independent self-directed reading and exercises
- Team-based learning

STUDENT ASSESSMENT

Assignments	12.5%	
Histology	2.5%	
Complementary Medicine Article Analysis	5%	
Dialysis Visit Personal Reflection	5%	
In-Class Assessments	12.5%	
Team-Based Learning – Urology	5%	(2.5% individual and 2.5% team)
Team-Based Learning – Nephrology	5%	(2.5% individual and 2.5% team)
Small Group Participation	2.5%	
Exams	75%	
Midterm	25%	(20% individual and 5% team)
End of Module	50%	

Assignment 1: Histology
 Value: 2.5% of final grade
 Due Date: August 18, 2017 at 23:59
 Length: N/A
 Description: Using lecture notes, study room materials, on-line websites and textbooks as resources, students are asked to label cells and structures in virtual slides of the kidney, ureter, bladder and urethra.

Assignment 2: Complementary Medicine Article Analysis

Value: 5% of final grade

Due Date: August 25, 2017 at 23:59

Length: Max 500 words

Description: Complementary medicine therapies are commonly used by patients, but it is important to critically review the empirical scientific evidence to support such therapies. A list of articles focusing on complementary medicine therapies pertaining to the kidney and urinary tract will be provided. Students will be expected to read and critically analyze **one** article from the list and submit their written analysis for review. The article (and any additional literature, where applicable) should be cited using the International Committee of Medical Journal Editors (ICMJE) recommendations, see http://www.nlm.nih.gov/bsd/uniform_requirements.html for examples. The analysis will be assessed using a scoring rubric.

Assignment 3: Dialysis Visit Personal Reflection Assignment

Value: 5% of final grade

Due Date: September 6, 2017 at 23:59

Length: Max 500 words

Description: The student will have the opportunity to interact with a patient with end-stage renal disease on dialysis. In 500 words or less, the student will individually reflect on this experience by commenting on what they saw, how it affected them, and what changes in their future assumptions, attitudes, values or beliefs resulted from the interaction. The reflection will be assessed using a scoring rubric.

In-Class Assessment I: Team-Based Learning Review - Urology

Value: 5% of final grade (2.5% individual and 2.5% team)

Date: September 12, 2017

Length: Individual readiness assurance test (35 mins), Team-Based test (60 mins)

Description: The clinical urology content of the course will be reviewed using a team-based approach, where students will first individually take a readiness assurance multiple choice test. After the individual test is completed, students will join pre-assigned and will answer a portion of the individual tests as a team using a scratch card specifically designed for team based learning. After the team component is completed, the entire class will review the team exam with the faculty instructor.

In-Class Assessment II: Team-Based Learning Review - Nephrology

Value: 5% of final grade (2.5% individual and 2.5% team)

Date: September 14, 2017

Length: Individual readiness assurance test (35 mins), Team-Based test (60 mins)

Description: The clinical nephrology content of the course will be reviewed using a team-based approach, where students will first individually take a readiness assurance multiple choice test. After the individual test is completed, students will join pre-assigned groups and will answer a portion of the individual tests as a team using a scratch card specifically designed for team based learning. After the team component is completed, the entire class will review the team exam with the faculty instructor.

In-Class Assessment III: Small Group Participation

Value: 2.5% of final grade

Date: August 24 and August 25, 2017

Length: N/A

Description: Small group interactive sessions working through electrolyte and acid-base clinical problems with a faculty preceptor. The participation mark is assessed through attendance and professionalism demonstrated during the sessions.

Midterm Exam

Value: 25% of final grade (20% individual and 5% team)

Date: August 28, 2017

Length: Individual readiness assurance test (50 mins), Team-Based test (60 mins)

Type: In-class

Description: Examination consisting of any of the following question types: multiple choice, multiple answer, fill in the blank and matching based on all content up to and including August 23, 2017.

End of Module Exam

Value: 50% of final grade

Date: September 18, 2017

Length: 110 minutes

Type: Comprehensive in-class

Description: Examination consisting of any of the following question types: multiple choice, multiple answer, fill in the blank, matching and possibly short answer based on all content from the course with a significant emphasis on content from August 24, 2017 until the end of the course.

Please refer to overall course promotion/failure/remediation standards outlined earlier in this syllabus.

*In-class assessments – these sessions are **MANDATORY** as per the Attendance Policy.

COURSE EVALUATION QUALITY IMPROVEMENT:

Based on experience over the previous year and feedback from students, changes which have been incorporated for the 2017/18 Academic Year in this module include:

1. Look at reorganizing the electrolyte and acid-base aspect of the curriculum and putting it back into class time.
2. Discuss with Regina students (with consultation with Foundations Directors and Regina lead) ways to improve the student experience there.
3. Provide more exam reviews throughout the year, instead of just the final examination
4. Consider removing/revamping some of the basic science components.

MODULE 2

Musculoskeletal Medicine

MODULE DIRECTORS

Rheumatology: Dr. Regina Taylor-Gjevre

Email Address: r.gjevre@usask.ca

Phone Number: 306-844-1145

Office Location: RUH 3647

Office Hours: please contact in advance for a meeting

Orthopaedics: Dr. Anne Dzus

Email Address: anne.dzus@usask.ca

Phone Number: 306-844-1114

Office Location: A5504 RUH

Office Hours: please contact in advance for a meeting

MODULE DESCRIPTION

This module will include the study of common, urgent and emergent musculoskeletal and connective tissue conditions affecting children and adults. Students will develop a clinical approach for patients with connective tissue diseases and for patients with musculoskeletal diseases/disorders/trauma/malignancies. Major vertical themes will be emphasized.

GENERAL MODULE OBJECTIVES

By the completion of this module, students will be able to:

- Learn to care for children and adults with common, urgent and emergent MSK and connective tissue conditions by acquiring knowledge and applying these learning and clinical reasoning skills to (Medical Expert)
- Generate a reasonable differential diagnosis (Medical Expert)
- Select and then interpret appropriate medical investigations (Medical Expert)
- Propose an appropriate management plan (Medical Expert)
- Explain the pathogenesis and pathophysiology at a level suitable for generalist medical graduates (Medical Expert)
- Recognize medical and surgical complications of MSK disease and therapies (Medical Expert)

Note: Students should also refer to overall Foundations II Course objectives within this syllabus. Additionally, for each module, detailed individual lecture and session objectives will be posted in One45. Please take care to review in advance.

MODULE SCHEDULE

All information relating to this course is available in **One45**. Please check One45 **DAILY** to ensure that you have the most current schedule information.

REQUIRED RESOURCES

Primer on the Rheumatic Diseases ed. J.Klippel (electronic textbook available to all students— on-line at U of S library)

Additional resource materials recommended to students include:

1. Musculoskeletal Physical Examination Training Videos (Rheumatology AND Orthopaedics)
McMaster University on-line **McMaster MSK Examination Video Series** training resource.
<https://fhs.mcmaster.ca/medicine/rheumatology/examine-hip.htm>
2. Health Care Resource Utilization and Stewardship: Choosing Wisely
<http://www.choosingwiselycanada.org/recommendations/rheumatology/>
<http://www.choosingwiselycanada.org/recommendations/orthopaedics/>

3. Diagnostic Imaging: Interpretation of MSK/Orthopaedic Radiographs

<http://www.mf.uni-lj.si/media-library/2015/01/4b317ee16ef18cb8001b1e27460b8964.pdf>

https://aotrauma.aofoundation.org/.../1_How%20to%20read%20x-rays_Handout.pdf

4. Rheumatology Resources

A. Canadian Rheumatology Patient and Physician on-line educational resource:

<http://rheuminfo.com>

B. The same group Rheum Info has also developed a more in depth educational resource with on-line modules for various educational levels entitled RheumTalks. Registration to allow access to the modules is without cost.

<http://rheumtalks.com>

C. American College of Rheumatology Educational on-line resource: (includes case based instructional material)

<http://www.rheumatology.org/education/training/Rheum2Learn.asp>

D. Osteoporosis Canada Educational Clinical Tools and Case Studies

<http://www.osteoporosis.ca/health-care-professionals/clinical-tools-and-resources/>

E. Get a Grip: RA/OA: There are two excellent educational on-line programs using virtual cases for RA and OA at the website below. (Registration is required, but there is no charge).

<https://www.mdcme.ca/grip/>

5. Orthopaedic Resources:

A. Orthopaedics: Wheelless' Textbook of Orthopaedics

<http://www.wheelsonline.com>

B. Ortho Bullets:

<http://www.orthobullets.com/>

Further individual session resources and pre-readings may also be posted within One45.

Note: Student pre-reading is required in this module. Students are strongly encouraged to come to class prepared to actively participate in the educational sessions.

MODULE DELIVERY

Students will learn through a variety of methods, including:

Large group didactic, interactive and case-based problem solving sessions

Interactive small group learning sessions

Independent self-directed reading and exercises

STUDENT ASSESSMENT

Assignments	10%
Applied Epidemiology Exercise	6%
Case Self-Directed Learning Skills Assessment	
Polyarthritis Cases	2%
Connective Tissue Disease Cases	2%

Exams and Quizzes	90%
Midterm I	20%
Midterm II	20%
End of Module	50%

Applied Epidemiology Exercise:

Value: 6% of final grade

Date: September 26, 2017

Descriptions: An in-class exercise utilizing selected epidemiologic principles to evaluate musculoskeletal disease from a population perspective. Students will participate in the exercise in-class and subsequently submit the completed assignment on BlackBoard.

Case Self-Directed Learning Assessments

Value: 4% of final grade (2% for each of two case sessions)

Dates: Polyarthrititis Case Session: September 20, 2017

Connective Tissue Disease Case Session: September 21, 2017

Length: N/A

Description: These small group case sessions are group learning exercises which involve reviewing a clinical case and posed questions. Students engage in sequential self-directed learning to include the following components:

1. identify, analyze, and synthesize information relevant to their learning needs;
2. assess the credibility of information sources;
3. share the information with their peers and tutor/facilitator;
4. apply their knowledge to the resolution of the clinical case;
5. receive feedback and are assessed on their skills in self-directed learning.

The assessment will be peer-generated and directly relate to the students participation and performance in the first four components listed. A standardized rubric for the peer generated score will be employed for each of the small group case sessions.

Midterm Exam I

Value: 20% of final grade

Date: September 25, 2017

Length: 50 minutes

Type: Comprehensive in-class

Description: May include multiple choice, matching, fill-in-the-blank questions and will cover content up to and including material covered from September 22, 2017.

Midterm Exam II

Value: 20% of final grade

Date: October 10, 2017

Length: 50 minutes

Type: Comprehensive in-class

Description: Multiple choice, multiple answer, fill in the blank and possibly short answer and will cover content up to and including material covered from October 6, 2017.

End of Module Exam

Value: 50% of final grade

Date: October 17

Length: 110 minutes

Type: Comprehensive in-class

Description: Multiple choice, multiple answer, fill in the blank and possibly short answer questions and will cover content up to and including material from October 16, 2017.

If you must be absent for a quiz, you must inform the College of Medicine Office prior to the quiz as per the procedure outlined in the [Attendance Policy](#). If they accept your reason for absence, the value of that quiz will be added to your final exam mark.

Please refer to overall course promotion/failure/remediation standards outlined earlier in this syllabus.

COURSE EVALUATION QUALITY IMPROVEMENT:

Based on experience over the previous year and feedback from students, changes which have been incorporated for the 2017/18 Academic Year in this module include:

1. Expansion of the number of sessions being taught from the Regina campus site.
2. Modification of the assessment plan to include two midterm examinations.
3. Provision of additional resources within the syllabus to support learning around interpretation of radiographs.

MODULE 3

Neurosciences

MODULE DIRECTORS

Neurology: Dr. Lizbeth Hernandez-Ronquillo

Email Address: lih428@mail.usask.ca

Phone Number: 306-844-1194

Office Location: RUH 2660

Office Hours: Please contact by e-mail to arrange a meeting

MODULE CO-DIRECTORS

Neurology: Dr. Jose Tellez-Zenteno

Email Address: jose.tellez@usask.ca

Phone Number: 306-844-1524

Office Location: RUH 1622

Office Hours: Please contact to arrange meeting

Neurosciences: Dr. Jennifer Chlan

Email address: jen.chlan@usask.ca

Phone number: 306-966-6557

Office Location: GB29 Health Sciences Building (B-Wing)

Office Hours: Please contact by e-mail to arrange meeting

MODULE DESCRIPTION

This module will include the study of the central nervous system including anatomy, pathophysiology, diagnosis, prognosis and treatment of the most frequent neurological conditions in children and adults. Students will develop a clinical approach for patients with common and urgent neurological conditions including stroke, epilepsy, dementia, migraine, PERIPHERAL nerve diseases, neuroinfections and neuromuscular disorders. In addition, the course provides key information regarding common neurosurgical problems such as tumors, back pain, treatment of vascular malformations and the approach to the most common congenital problems.

GENERAL MODULE OBJECTIVES

By the completion of this module, students will be able to:

- Identify the basic localization and lateralization of common neurologic conditions (Medical Expert)
- Construct a differential diagnosis in a patient presenting with acute and common neurological conditions (Medical Expert)
- Order appropriate medical investigations and be able to interpret them (Medical Expert)
- Outline a management plan for patients with acute and common neurological conditions (Medical Expert)
- Explain the pathogenesis and pathophysiology of acute and common or urgent neurological conditions (Medical Expert)

Note: Students should also refer to overall Foundations II Course objectives within this syllabus. Additionally, for each module, detailed individual lecture and session objectives will be posted in One45. Please take care to review in advance.

MODULE SCHEDULE

All information relating to this course is available in **One45**. Please check One45 **DAILY** to ensure that you have the most current schedule information.

REQUIRED RESOURCES

(On reserve at the Leslie and Irene Dubé Health Sciences Library)

Neuroanatomy Section:

*** This textbook is required to work through for the cases covered in this section and will be necessary for the first week of class ***

* Blumenfeld, H. (2010) Neuroanatomy through Clinical Cases, 2nd edition. Sinauer Associates, Inc. Sunderland, MA QM451 .B64 2010 (also available for purchase online)

Neurology/Neurosurgery Section:

Hankey's Clinical Neurology, Second Edition. Philip B. Gorelick, Fernando Testai, Graeme Hankey, Joanna M. Wardlaw

Merritt's Neurology – by Lewis P. Rowland (Author, Editor), Timothy A. Pedley MD (Editor)

Functional Neuroanatomy: Text and Atlas, 2nd Edition (LANGE Basic Science) Paperback – by Adel Afifi (Author), Ronald Bergman (Author)

Adams and Victor's Principles of Neurology 10th Edition Hardcover – by Allan Ropper (Author), Martin Samuels (Author)

Netter's Neurology (Netter Clinical Science)- by H. Royden Jones Jr. (Author), Jayashri Srinivasan (Author), Gregory J. Allam (Author), Richard A. Baker (Author), Inc Lahey Clinic (Editor)

MODULE DELIVERY

Students will learn through a variety of methods, including:

Large group didactic, interactive and case-based problem solving sessions

Interactive small group learning sessions

Independent self-directed reading and exercises

STUDENT ASSESSMENT

Assignments 10%

Adult Epilepsy Assignment 10%

Exams and Quizzes 90%

Midterm I 20%

Midterm II 20%

End of Module 50%

Assignment 1: Adult Epilepsy Assignment

Value: 10% of final grade

Date: November 17, 2017

Length: Two neurological cases

Description: The assignment will consist in two neurological cases. They will be able to describe the localization and lateralization of lesion, propose a main diagnosis and differential diagnosis, adequate management of the cases and able to describe the prognosis of the neurological condition.

Midterm I

Value: 20% of final grade
Date: October 30, 2017
Length: 50 minutes
Type: Comprehensive in-class
Description: Multiple choice, multiple answer, fill in the blank and possibly short answer questions.

Midterm II

Value: 20% of final grade
Date: November 14, 2017
Length: 50 minutes
Type: Comprehensive in-class
Description: Multiple choice, multiple answer, fill in the blank and possibly short answer questions.

End of Module Exam

Value: 50% of final grade
Date: November 23, 2017
Length: 110 minutes
Type: Comprehensive in-class
Description: Multiple choice, multiple answer, fill in the blank and possibly short answer questions based on all module content with a focus on content from lectures and assignments.

Please refer to overall course promotion/failure/remediation standards outlined earlier in this syllabus.

COURSE EVALUATION QUALITY IMPROVEMENT:

Based on experience over the previous year and feedback from students, changes which have been incorporated for the 2017/18 Academic Year in this module include:

1. Recruitment of at least one lecturer to deliver content from the Regina site during the didactic portion of the course.
2. Modification of the weights for the assignment and quizzes.

IMPORTANT AND RELEVANT STUDENT INFORMATION

The following information is extremely important for your success in medical school. Please refer to the [UGME Policies](#) page and the [Student Information Guide](#) for the following policies:

UGME CONTACT INFORMATION

EMAIL COMMUNICATIONS

ETHICS AND PROFESSIONALISM

PROGRAM EVALUATION

GUIDELINES FOR PROVIDING FEEDBACK

EMERGENCY PROCEDURES

MD PROGRAM ATTENDANCE POLICY

ASSESSMENT POLICY

PROMOTION STANDARDS

CONFLICT OF INTEREST

NON-INVOLVEMENT OF HEALTH CARE PROVIDERS IN STUDENT ASSESSMENT

APPEALS PROCEDURES

STUDENT DISCRIMINATION, HARRASSMENT, AND MISTREATMENT PROCEDURE

ACCOMMODATION OF STUDENTS WITH DISABILITIES

OFFICE OF STUDENT AFFAIRS

Where a specific College of Medicine policy or procedure does not exist, the College refers to the U of S Academic Courses Policy at <http://policies.usask.ca/policies/academic-affairs/academic-courses.php>

INTEGRITY DEFINED (FROM THE OFFICE OF THE UNIVERSITY SECRETARY)

The University of Saskatchewan is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Student Conduct & Appeals section of the University Secretary Website and avoid any behavior that could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

All students should read and be familiar with the Regulations on Academic Student Misconduct (www.usask.ca/secretariat/student-conduct-appeals/StudentAcademicMisconduct.pdf) as well as the Standard of Student Conduct in Non-Academic Matters and Procedures for Resolution of Complaints and Appeals (www.usask.ca/secretariat/student-conduct-appeals/StudentNon-AcademicMisconduct.pdf)

For more information on what academic integrity means for students see the Student Conduct & Appeals section of the University Secretary Website at: www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf

EXAMINATIONS WITH DISABILITY SERVICES FOR STUDENTS (DSS)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Disability Services for Students (DSS) if they have not already done so. Students who suspect they may have disabilities should contact the Student Affairs Coordinator at the Office of Student Affairs (OSA) for advice and referrals. In order to access DSS programs and supports, students must follow DSS policy and procedures. For more information, check <https://students.usask.ca/health/centres/disability-services-for-students.php>, or contact DSS at 966-7273 or dss@usask.ca.

Students registered with DSS may request alternative arrangements for mid-term and final examinations.

Students must arrange such accommodations through the Office of Student Affairs (OSA) by the stated deadlines. Instructors shall provide the examinations for students who are being accommodated by the deadlines established by OSA.

STUDENT SUPPORTS

COLLEGE OF MEDICINE, OFFICE OF STUDENT AFFAIRS

Student Affairs offers confidential support and advocacy at arm's length from the academic offices. For more information, please contact the COM Student Affairs Coordinator, Edith Conacher at edith.conacher@usask.ca or 306-966-4751 for Saskatoon site students and Dr. Nicole Fahlman at nicole.fahlman@usask.ca or 306-209-0142 for Regina site students.

STUDENT LEARNING SERVICES

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site www.usask.ca/ulc/.

STUDENT AND ENROLMENT SERVICES DIVISION

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the SESD web site www.usask.ca/sesd/

As we gather here today, we acknowledge we are on Treaty Six Territory and the Homeland of the Métis. We pay our respect to the First Nation and Métis ancestors of this place and reaffirm our relationship with one another. We recognize that in the course of your studies you will spend time learning in other traditional territories and Métis homelands. We wish you safe, productive and respectful encounters in these places.