Foundations in Clinical Medicine II

MEDC 216.18
YEAR 2 TERM 3
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.
- Generate reasonable differential diagnoses and management plans.
- Select and interpret appropriate investigations.
- Describe evidence-informed principles of surveillance and screening for the normal/healthy population and for at risk populations.

In addition, each discipline-specific module in the course will also have its own specific module objectives and individual session objectives of learning. Detailed individual lecture and session objectives will be posted in one45. Please take care to review in advance.

The University of Saskatchewan Learning Charter is intended to define aspirations about the learning experience that the University aims to provide, and the roles to be played in realizing these aspirations by students, instructors and the institution. A copy of the Learning Charter can be found at: www.usask.ca/university_secretary/LearningCharter.pdf

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 the most current schedule information.

All learning objectives (course, module, and session) can be accessed on the College of Medicine/Curriculum website under the appropriate year and course. A print version is also available. Please access the link below for the most current objectives.

https://share.usask.ca/medicine/one45/kbase/Curriculum%20Objectives.aspx

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 students 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 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 assistance is needed finding these texts, contact the Health Sciences librarian.


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

Physiology

Histology

OR
**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**

**Microbiology**

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

**Pathology**

**Diagnostic Imaging**
[http://sites.usask.ca/undergradimaging/](http://sites.usask.ca/undergradimaging/)
<table>
<thead>
<tr>
<th>Course Component</th>
<th>Module Components</th>
<th>Module Weight</th>
<th>Component Requirement</th>
<th>Weighting in Final Foundations II Mark</th>
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<tr>
<td>Kidney and Urinary Tract Module</td>
<td>Histology Assignment</td>
<td>2.5%</td>
<td>70% on Module</td>
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<td></td>
<td>CAM Assignment</td>
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<td></td>
<td>Dialysis Reflection</td>
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<td></td>
<td>Physiology Concept Map</td>
<td>2.5%</td>
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<td></td>
<td>TBL – Basic Sciences</td>
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<td></td>
<td>TBL - Tool Box/Imaging</td>
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<td>TBL - Electrolyte/Acid Base</td>
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<td>TBL - Nephrology</td>
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<td>Polyarthritis Cases</td>
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<td>Connective Tissue Cases</td>
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<tr>
<td></td>
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<td></td>
<td>End of Module Exam</td>
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<td>Neurosciences Module</td>
<td>Adult Neurology Assignment</td>
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<td></td>
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<td>60% on Exam</td>
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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 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, tests and examinations in each of the Foundations modules, as well as the Foundations II Final Examination. A mark of 0% will be given for any missed quiz, test or examination, unless otherwise arranged as per the College of Medicine Attendance Policy and Deferral Policy. Assignments are adjudicated as per the Assignment Submission 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 will 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 or have accrued deficit points in two (2) modules.

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 ONLY be provided on dates other than those specified for each module and for the integrated exam 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 will 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 (4) or more** grade deficit points in Foundations II or accrued deficit points in **all three (3)** modules 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 1) 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**

<table>
<thead>
<tr>
<th>Overall grade achieved in module before remediation or grade achieved in Supplemental Examinations</th>
<th>Average &lt;70% and ≥ 60%</th>
<th>Average &lt;60% and ≥ 50%</th>
<th>Average &lt;50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kidney and Urinary Tract Module</td>
<td>I</td>
<td>II</td>
<td>III</td>
</tr>
<tr>
<td>Musculoskeletal Module</td>
<td>I</td>
<td>II</td>
<td>III</td>
</tr>
<tr>
<td>Neurology Module</td>
<td>I</td>
<td>II</td>
<td>III</td>
</tr>
<tr>
<td>Foundations II Final Examination</td>
<td>N/A</td>
<td>I</td>
<td>II</td>
</tr>
</tbody>
</table>

I: one grade deficit point; II: two grade deficit points; III: three grade deficit points; N/A: not applicable
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. Rahul Mainra
Email Address: rahul.mainra@usask.ca
Phone Number: 306-655-5934
Office Location: St. Paul’s Hospital
Office Hours: 08:00-16:00 Hours

Urology: Dr. Trustin Domes
Email Address: trustin.domes@usask.ca
Phone Number: 306-966-5678
Office Location: Undergrad 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
- 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
  - Elevated Serum Creatinine and/or Urea
  - Electrolyte and Acid/Base Abnormalities
  - Hypertension
  - Hematuria and/or 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)
• 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
• Formulate a patient-centered management plan for diagnosed common and urgent renal and urinary tract conditions, including non-pharmacological, pharmacological and surgical treatment options
• Critically evaluate the evidence for applying complementary alternative medical approaches to the patient with common renal and urinary tract conditions
• Discuss different preventative health strategies as they apply to conditions of the kidney and urinary tract
• Elicit and synthesize the history, physical examination, laboratory and imaging data to develop a differential diagnosis of the following pediatric conditions:
  ● Hypertension
  ● Hematuria and/or Proteinuria
  ● 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 the most current schedule information.

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

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/
Nephrology on Demand  https://blog.ecu.edu/sites/nephrologyondemand/?page_id=6949
Renal Physiology in Real Time  http://www.biologymad.com/resources/kidney.swf

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  15%

- Histology  2.5%
- Physiology Concept Map  2.5%
- Complementary Medicine Article Analysis  5%
- Dialysis Visit Personal Reflection  5%

In-Class Assessments  50%

- Team-Based Learning - Basic Sciences  10% (7.5% individual and 2.5% team)
- Team-Based Learning – Tool Box  10% (7.5% individual and 2.5% team)
- Team-Based Learning - Electrolyte/Acid Bases  10% (7.5% individual and 2.5% team)
- Team-Based Learning – Urology  10% (7.5% individual and 2.5% team)
- Team-Based Learning – Nephrology  10% (7.5% individual and 2.5% team)

Exams  35%

End of Module  35%
Assignment 1: Histology
Value: 2.5% of Final Grade
Due Date: August 16, 2018 at 11:59 pm
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: Physiology Concept Map
Value: 2.5% of Final Grade
Due Date: August 18, 2018 at 11:59 pm
Description: Organize and link renal physiological principles together in small groups using a concept map. The concept map will include a focus question or theme, topics or concepts and linking arrows and words. The concept map will be assessed using a scoring rubric.

Assignment 3: Complementary Medicine Article Analysis
Value: 5% of Final Grade
Due Date: August 31, 2018 at 11:59 pm
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 4: Dialysis Visit Personal Reflection Assignment
Value: 5% of final grade
Due Date: September 7, 2018 at 11:59 pm
Description: The student will have the opportunity to interact with a patient with end-stage renal disease on dialysis. 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 - Basic Sciences*

Value: 10% of Final Grade (7.5% individual and 2.5% team)
Date: August 20, 2018
Length: Individual Readiness Assurance Test (approx. 30 mins), Team-Based Test (approx. 45 mins)
Description: The basic science 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 II: Team-Based Learning Review - Tool Box Investigations*

Value: 10% of Final Grade (7.5% individual and 2.5% team)
Date: August 23, 2018
Length: Individual Readiness Assurance Test (approx. 30 mins), Team-Based Test (approx. 45 mins)
Description: The tool box investigations 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 III: Team-Based Learning Review - Electrolytes and Acid-Bases*

Value: 10% of Final Grade (7.5% individual and 2.5% team)
Date: August 27, 2018
Length: Individual Readiness Assurance Test (approx. 30 mins), Team-Based Test (approx. 45 mins)
Description: The electrolytes and acid-base 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 IV: Team-Based Learning Review – Nephrology*

Value: 10% of Final Grade (7.5% individual and 2.5% team)
Date: September 11, 2018
Length: Individual Readiness Assurance Test (30 mins), Team-Based Test (45 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 V: Team-Based Learning Review – Urology**

**Value:** 10% of Final Grade (7.5% individual and 2.5% team)

**Date:** September 13, 2018

**Length:** Individual Readiness Assurance Test (approx. 35 mins), Team-Based Test (approx. 45 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.

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**End of Module Exam**

**Value:** 35% of Final Grade

**Date:** September 17, 2018

**Type:** Comprehensive In-Class

**Description:** Selection style may include: multiple choice, multiple choice multiple answer, fill in the blank, true-false, short answer, matching, and extended written questions based on all content from 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.

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**COURSE EVALUATION QUALITY IMPROVEMENT**

Based on experience over the previous year and feedback from students, changes which have been incorporated for the 2018/19 Academic Year in this module include:

1. Reorganization of the electrolyte and acid-base aspect of the curriculum and putting it back into class time.

2. Ongoing discussions with Regina students (with consultation with Foundations Directors and Regina lead) regarding ways to improve the student experience there.

3. Provide more exam reviews throughout the module, instead of just the end of module examination.

4. 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: AS504 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:
  - Generate a reasonable differential diagnosis
  - Select and then interpret appropriate medical investigations
  - Propose an appropriate management plan
  - Explain the pathogenesis and pathophysiology at a level suitable for generalist medical graduates
  - Recognize medical and surgical complications of MSK disease and therapies

**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 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](https://fhs.mcmaster.ca/medicine/rheumatology/examine-hip.htm)


3. Diagnostic Imaging: Interpretation of MSK/Orthopaedic Radiographs
   - [http://www.mf.uni-lij.si/media-library/2015/01/4b317ee16ef18cb001b1e27460b8964.pdf](http://www.mf.uni-lij.si/media-library/2015/01/4b317ee16ef18cb001b1e27460b8964.pdf)
   - [https://aotrauma.aofoundation.org/.../1_How%20to%20read%20x-rays_Handout.pdf](https://aotrauma.aofoundation.org/.../1_How%20to%20read%20x-rays_Handout.pdf)
   - [https://undergradimaging.pressbooks.com/](https://undergradimaging.pressbooks.com/) (Undergrad Diagnostic Imaging eBook)
   - [http://sites.usask.ca/undergradimaging/](http://sites.usask.ca/undergradimaging/) (access links to download the eBook as a pdf or file for an eBook reader)
   - [https://medicine.usask.ca/documents/ugme/roadmaps/DiagnosticImaging.pdf](https://medicine.usask.ca/documents/ugme/roadmaps/DiagnosticImaging.pdf) (Diagnostic Imaging Roadmap)

4. Rheumatology Resources
   A. Canadian Rheumatology Patient and Physician on-line educational resource: [http://rheuminfo.com](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](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](http://www.rheumatology.org/education/training/Rheum2Learn.asp)
   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/](https://www.mdcme.ca/grip/)
5. Orthopaedic Resources:

A. Orthopaedics: Wheeless’ Textbook of Orthopaedics
   http://www.wheelessonline.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**

<table>
<thead>
<tr>
<th>Assessments</th>
<th>10%</th>
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</thead>
<tbody>
<tr>
<td>Applied Epidemiology Exercise</td>
<td>5%</td>
</tr>
<tr>
<td>Case Self-Directed Learning Skills Assessment</td>
<td></td>
</tr>
<tr>
<td>Polyarthritis Cases</td>
<td>2.5%</td>
</tr>
<tr>
<td>Connective Tissue Disease Cases</td>
<td>2.5%</td>
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<table>
<thead>
<tr>
<th>Exams</th>
<th>90%</th>
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<tbody>
<tr>
<td>Midterm I</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm II</td>
<td>20%</td>
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<tr>
<td>End of Module</td>
<td>50%</td>
</tr>
</tbody>
</table>

*Applied Epidemiology Exercise*

- **Value:** 5% of Final Grade
- **Date:** September 28, 2018
- **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: 5% of Final Grade (2.5% for each of two case sessions)

Dates: Polyarthritis Case Session: September 24, 2018
Connective Tissue Disease Case Session: September 27, 2018

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 27, 2018
Type: Comprehensive In-Class
Description: Selection style may include: multiple choice, multiple choice multiple answer, fill in the blank, true-false, short answer, matching, and extended written questions.

Midterm Exam II

Value: 20% of Final Grade
Date: October 5, 2018
Type: Comprehensive In-Class
Description: Selection style may include: multiple choice, multiple choice multiple answer, fill in the blank, true-false, short answer, matching, and extended written questions.
End of Module Exam

Value: 50% of Final Grade
Date: October 22, 2018
Type: Comprehensive In-Class
Description: Selection style may include: multiple choice, multiple choice multiple answer, fill in the blank, true-false, short answer, matching, and extended written questions.

If a student must be absent for a quiz or minor assessment, the student must inform the College of Medicine Office prior to the session as per the procedure outlined in the Attendance Policy. If the absence is approved, the value of that quiz or minor assessment will be added to the student’s 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 2018/19 Academic Year in this module include:

1. Holding the midterms earlier in the module in order to enhance opportunities for feedback to students prior to the final module examination.
2. Conversion of the polyarthritis and connective tissue disease small group case reviews to two hours of small group work rather than one hour of small group work and one large group review session.
3. Provision of additional resources within the syllabus to support learning around interpretation of radiographs including the e-Book resource prepared by Dr. Burbridge.
4. Revision of the vertical theme pain curriculum which includes streamlining of pain related session content with this module.
5. Positioning the laboratory medicine session earlier within the module sequence.
MODULE 3

Neurosciences

MODULE DIRECTOR

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: 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: contact by e-mail to arrange meeting

Neurology: Dr. Brett Graham
Email Address: brett.graham@usask.ca
Phone Number: 306-931-2858
Office Location: Neurology Wing, RUH Old Building
Office Hours: contact to arrange a meeting

MODULE DESCRIPTION

This module will include the study of the central nervous system including anatomy, pathophysiology, pharmacology 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 acute neurological conditions including stroke, epilepsy, dementia, migraine, peripheral nerve diseases, neuromuscular disorders and neuroinfections. In addition, the course provides key information regarding common neurosurgical problems such as tumors, back pain, brain injury, hydrocephaly and treatment of cerebrovascular diseases, and the approach to the most common abnormalities of the central nervous system.
GENERAL MODULE OBJECTIVES

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

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

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 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 *


Neurology/Neurosurgery Section:

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

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

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 Neurology 10%

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

Assignment: Adult Neurology
Value: 10% of Final Grade
Date: Released on October 31 and due on November 13, 2018
Length: Two neurological cases
Description: The assignment will consist of two neurological cases. Students will be able to describe the localization and lateralization of lesion, propose the main diagnosis and differential diagnosis, adequate management of the cases and describe the prognosis of the neurological condition.

Midterm I
Value: 20% of Final Grade
Date: October 30, 2018
Type: Comprehensive In-Class
Description: Selection style may include: multiple choice, multiple choice multiple answer, fill in the blank, true-false, short answer, matching, and extended written questions.

Midterm II
Value: 20% of Final Grade
Date: November 15, 2018
Type: Comprehensive In-Class
Description: Selection style may include: multiple choice, multiple choice multiple answer, fill in the blank, true-false, short answer, matching, and extended written questions.

End of Module Exam
Value: 50% of Final Grade
Date: November 26, 2018
Type: Comprehensive In-Class
Description: Selection style may include: multiple choice, multiple choice multiple answer, fill in the blank, true-false, short answer, matching, and extended written 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 2018/19 Academic Year in this module include:

1. Changes to further improve the assignment.
2. Addition of cataract lecture.
3. Organization of the schedule aggregating blocks of themes: anatomy, pain, ophthalmology, development/pediatric neurology, and acute and chronic diseases.
IMPORTANT AND RELEVANT STUDENT INFORMATION

The following information is extremely important for student 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-ININVOLVEMENT OF HEALTH CARE PROVIDERS IN STUDENT ASSESSMENT
- APPEALS PROCEDURES
- STUDENT DISCRIMINATION, HARASSMENT, 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

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. 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.

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.
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.

**EXAM REVIEW PROCESS**

The College understands the pedagogical value of a post exam review and feels that these are best handled by the Course Director(s)/Instructor(s) who can clarify concepts rather than students just viewing the “right” answer. Time has been built into the curriculum for the post exam reviews. **Please Note:** Students will not be allowed to see their individual exam during these sessions nor are they eligible to view their exam unless they were unsuccessful in achieving the minimum mark of 70%. In the event of a specific module or exam failure, a student may request to review their assessment by contacting the appropriate Module Director, Course Director or Course Chair.

**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](http://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.

**COPYRIGHT**

Course materials are provided to students based on registration in a class, and anything created by professors and instructors is their intellectual property, unless materials are designated as open education resources. This includes exams, PowerPoint/PDF slides and other course notes. Additionally, other copyright-protected materials created by textbook publishers and authors may be provided to students based on license terms and educational exceptions in the Canadian Copyright Act (see [http://laws-lois.justice.gc.ca/eng/acts/C-42/index.html](http://laws-lois.justice.gc.ca/eng/acts/C-42/index.html)).

**Before copying or distributing others’ copyright-protected materials, please ensure that use of the materials is covered under the University’s Fair Dealing Copyright Guidelines available at [https://library.usask.ca/copyright/general-information/fair-dealing-guidelines.php](https://library.usask.ca/copyright/general-information/fair-dealing-guidelines.php).** For example, posting others’ copyright-protected materials on the open web is not covered under the University’s Fair Dealing Copyright Guidelines, and doing so requires permission from the copyright holder.

For more information about copyright, please visit [https://library.usask.ca/copyright/index.php](https://library.usask.ca/copyright/index.php) where there is information for students available at [https://library.usask.ca/copyright/students/rights.php](https://library.usask.ca/copyright/students/rights.php), or contact the University’s Copyright Coordinator at mailto:copyright.coordinator@usask.ca or 306-966-8817.
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 ACCESS AND EQUITY SERVICES (AES)

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Access and Equity Services (AES) 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 AES programs and supports, students must follow AES policy and procedures. For more information, check www.students.usask.ca/aes, or contact AES at 966-7273 or aes@usask.ca.

Students registered with AES 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 AES.

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, in Saskatoon please contact:

COM Student Affairs Coordinator, Edith Conacher at edith.conacher@usask.ca or 306-966-4751

COM Student Affairs Coordinator (Regina Campus), Lisa Persaud at lisa.Persaud@saskhealthauthority.ca or 306-766-0620
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 http://library.usask.ca/studentlearning/.

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 students’ web site http://students.usask.ca.

FINANCIAL SUPPORT

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact Student Central (https://students.usask.ca/student-central.php).

ABORIGINAL STUDENTS CENTRE

The Aboriginal Students Centre (ASC) is dedicated to supporting Aboriginal student academic and personal success. The centre offers personal, social, cultural and some academic supports to Métis, First Nations, and Inuit students. The centre is also dedicated to intercultural education, brining Aboriginal and non-Aboriginal students together to learn from, with and about one another in a respectful, inclusive and safe environment.

Students are encouraged to visit the ASC’s Facebook page (https://www.facebook.com/aboriginalstudentscentre/) to learn more.

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.