



Foundations in Clinical Medicine II

MEDC 216.18

YEAR 2 TERM 3

 **COURSE SYLLABUS**
2020/2021



UNIVERSITY OF SASKATCHEWAN
College of Medicine
MEDICINE.USASK.CA

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.

Foundations in Clinical Medicine II – Course Overview

The Covid-19 pandemic has caused significant changes to delivery of medical curriculum. We are planning to include in-person educational experiences, where possible, during the 2020-21 Fall Term. However due to pandemic circumstances, the College of Medicine undergraduate education program may need to

- *Modify curriculum content delivery outside of usual procedures and at short notice.*
- *Modify Course assessments which may need to be changed to a different format, or to have different weighting from that outlined in the syllabus.*

As information becomes available, we will provide updates to students on any changes relating to content originally outlined in the syllabus.

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:

1. Explain the pathogenesis and pathophysiology of the subject conditions, with reference to the divergence from normal anatomy, histology and/or physiology.
2. Generate reasonable differential diagnoses and management plans.
3. Select and interpret appropriate investigations.
4. Develop an evidence informed approach to health promotion, illness prevention and disease screening for healthy and 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.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. It may be helpful to review websites such as <http://www.choosingwiselycanada.org>.

The Spectrum app is available for free download through the App Store and Google Play. A web-version is also available <https://spectrum.app/saskatoon/>

The CANImmunize app is available for free download through the App Store and Google Play.

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.

1. A general medicine text such as Harrison's Principles of Internal Medicine by Kasper et al (ISBN: 1 978-0-07-1802161 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 Marc dante, 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, the student should be regularly referring to their Principles Course texts to assist 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 (2016) by M.H. Ross and W. Paulina [ISBN 978-1-4511-8742-7]

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

Goodman & Gilman's Manual of Pharmacology and Therapeutics (2nd Edition). Eds. By Hilal-Dandan & Brunton.

Principles of Pharmacology: The pathophysiologic Basis of Drug Therapy. By David E Golan (3rd Edition)

Applied Pharmacology. By Stan Bardal, Jason Waechter, Doug Martin. [978-1-4377-0310-8]

Microbiology

Review of Medical Microbiology and Immunology (Lange Medical Books) Paperback. By Warren Levinson (Author). [978-0071818117]

Clinical Microbiology Made Ridiculously Simple: Mark Gladwin MD, William Trattler MD, C. Scott Mahan MD [978-1-9356-6015-6]

Immunology

Review of Medical Microbiology and Immunology (Lange Medical Books) Paperback. By Warren Levinson (Author). [978-0071818117]

Immunology Made Ridiculously Simple: Massoud Mahmoudi [978-0-940780-89-7]

Pathology

Robbins Basic Pathology, 9e (Robbins Pathology) [Hardcover] Vinay Kumar MBBS MD FRCPath (Author), Abdul K. Abbas MBBS (Author), Jon C. Aster MD PhD (Author) [ISBN 978-1-4377-1781-5] Edition 9

Undergraduate Diagnostic Imaging Fundamentals E-Book

The Undergraduate Diagnostic Imaging Fundamentals, by Dr. Brent Burbridge (MD, FRCPC) is an e-book resource to augment the presentation for imaging of common clinical conditions. Guiding principles related to minimizing radiation exposure, requesting appropriate imaging, and static images are enhanced and discussed. Additionally, users can access other imaging from the Dicom viewer (ODIN) to further advance their experience with viewing diagnostic imaging pathologies.

<https://openpress.usask.ca/undergradimaging/>

COURSE ASSESSMENT OVERVIEW

Course Component	Module Components	Module Weight	Component Requirement	Weighting in Final Foundations II Mark
Kidney and Urinary Tract Module	Histology Assignment	5%	70% on Module	33.33
	Critical Appraisal Article Analysis	7.5%		
	Dialysis Reflection	7.5%		
	Consolidation Concept Map	10%		
	Midterm Exam	20%		
	End of Module Exam	50%		
MSK Module (Rheum/Ortho)	Applied Epidemiology Exercise	4%	70% on Module	33.33%
	Case Self-Directed Learning			
	Polyarthritis Cases	1%		
	Connective Tissue Cases	1%		
	Midterm I	22%		
	Midterm II	22%		
	End of Module Exam	50%		
Neurosciences Module	Online Training Module	15%	70% on Module	33.34%
	Midterm I	22%		
	Midterm II	23%		
	End of Module Exam	40%		
Course Total Mark				100.00%
Final Foundations II Exam			60% on Exam	

- * The Foundations II Final exam is a cumulative exam and tests clinical application of content from both Foundations I and II. It is modeled on the national exam at the end of medical school, the MCCQE part 1 exam, and consists of a series of clinical vignettes that test a student's ability to diagnose, investigate, and treat various health conditions. Question styles will include: multiple choice, extended multiple choice, fill-in-the-blank, and matching. A minimum score of 60% is required for successful course completion.
- * In order to provide students more individualized feedback following most exams students will receive individual feedback sheets that will detail the student's progress towards achievement of the course/module objectives.

EXAM PROCTORING

Due to pandemic related circumstances, examinations during this course may be delivered remotely. In that event, proctoring software or other remote invigilation methods will be employed concurrently during the examination to ensure academic integrity of the assessment.

RUBRICS

Where applicable, rubrics for all assignments will be posted on one45 for the relevant session. For those assignments submitted via Blackboard they are also posted in Blackboard. In the event of a discrepancy between the two versions, that posted on Blackboard shall be taken to be correct.

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 Neurosciences Modules). Students must also achieve a minimum grade of 60% in the Foundations Final Examination for Foundations II. 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 Final 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 Foundations II Final Examination will be allocated grade deficit points, which are weighted based on the percentage grade below the pass standard for either the modules or Foundations II Final 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 Chair(s); Year Chair(s), Academic Support Specialist or designates), or others as needed, 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 may be required to again meet with the course sub-committee.

- D) Students who have failed a module or the Foundations II Final Exam may be offered remediation and supplemental assessment. 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), or the number of failed modules. 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 supplemental assessments as per usual course policy. Further decisions regarding academic outcomes will be adjudicated by the Year 2 (Term 3) Promotions Committee and the Student Academic Management Committee.
- E) The module director will determine the specific type of remediation needed for each individual student. Remediation may be in the form of additional assignments, assigned readings, and/or meetings with the module director or designate. The remediation timeline will begin once the student has been notified of failure in a module or the Foundations I Final. A remediation plan will be arranged between the module director and student, in consultation with the Academic Support Specialist, which will be carried out from the beginning of the remediation timeline until the date of the supplemental assessment. The module director, in consultation with the Assessment Specialist, will determine the specific type of supplemental assessment
- 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 within 7 days of the last final exam and that supplemental exams for the final module of the term and the Foundations II Final Exam will be held mid-January. Where students have supplementals in more than one module or course then adjustments may be made to the supplemental exam schedule by the Year Chair in coordination with Course Chair/Module Director(s).
- Supplemental examinations will **ONLY** be provided on dates other than those specified for each module and for the Foundations Final Exam in exceptional circumstances (such as personal illness, bereavement, etc.), and will be adjudicated by the Course Sub-Committee in consultation with Academic Director UGME. 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 3) Promotions Committee and the Student Academic Management Committee.
- G) A maximum of **one (1)** supplemental examination per module will be allowed, up to the point of course failure (see D). As well, students will only be allowed to write **one (1)** supplemental examination for the Foundations II Final Exam, up to the point of course failure (see D). 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 3) Promotions Committee and the Student Academic Management Committee.
- H) If a student fails an assignment identified as a mandatory pass in a module, supplemental assignments may 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.

***NOTE** All assessments including the final exam are mandatory to complete.

- I) If a failure of a supplemental examination occurs during or after the final examination period, the 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.
- J) 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 Foundations II Final Exam).
- K) Grade deficit points will not appear on the student's transcript, nor are they transferred to any other course in the UGME Program.

Students who are eligible for supplemental examination will be contacted by the Module Director and should arrange to meet with the Module Director and the Academic Support Specialist 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.		
	<70% and \geq 60%	<60% and \geq 50%	<50%
Kidney and Urinary Tract Module	I	II	III
Musculoskeletal Module	I	II	III
Neurology Module	I	II	III
Foundations II Final Exam	N/A	I	II

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

EXAM REVIEW

Time has been built into the curriculum for post examination reviews. During these sessions Directors or Chairs will clarify key concepts where misunderstanding was apparent. Students will not be provided opportunity to view their examination questions/papers as part of a group or individual review process. In the event of specific module or exam failure, a student may contact the appropriate Module Director, Course Director or Course Chair to arrange an opportunity to identify concepts or content areas where difficulty was experienced during the examinations.

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: 306-966-4330

Office Location: HSB 3A20.22

Office Hours: Variable, email first to inquire

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:

1. Describe the embryological development, normal anatomical structure and physiological function of the kidney and urinary tract organs.
2. 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
 - Proteinuria
 - Lower Urinary Tract Symptoms and Obstruction
 - Upper Urinary Tract Symptoms and Obstruction
 - Urinary Tract Infection
 - Urinary Tract Trauma
 - Urothelial, Renal, and Prostate Cancer
 - Voiding Abnormalities (enuresis and incontinence)
 - Acute Kidney Injury and Chronic Kidney Disease
 - Cystic Kidney Disease
 - End-Stage Renal Disease and Options for Renal Replacement Therapy

3. Elicit and synthesize the history, physical examination, laboratory and imaging data to develop a differential diagnosis of the core presenting patient issues (as above).
4. List, interpret and calculate (when applicable) appropriate resource-conscious laboratory and imaging findings which are key in the process of differential diagnosis of common and urgent renal and urinary tract conditions.
5. Formulate a patient-centered management plan for common and urgent renal and urinary tract conditions, including non-pharmacological, pharmacological and surgical treatment options.
6. Critically evaluate the evidence of various medical approaches to the patient with common renal and urinary tract conditions.
7. Discuss preventative health strategies as they apply to conditions of the kidney and urinary tract.
8. 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 Kidney Injury and Chronic Kidney Disease
 - Enuresis and Incontinence
 - Hydronephrosis
 - Urinary Tract Infection
 - Foreskin Abnormalities
 - Cryptorchidism
9. Present a summary of pathophysiological processes pertaining to urological and nephrological disease states.
10. Demonstrate collaboration and peer-teaching skills.

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

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

Precious Bodily Fluids <http://pbfluids.com>

Renal Physiology in Real Time <http://www.biologymad.com/resources/kidney.swf>

Surgery 101 Podcasts (Urology Sections) <http://surgery101.libsyn.com/?search=urology>

UKidney, Internet School of Nephrology <https://ukidney.com>

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

STUDENT ASSESSMENT

Assessments	30%
Histology	5%
Consolidation Concept Map	10%
Critical Appraisal Article Analysis	7.5%
Dialysis Visit Personal Reflection	7.5%
Exams	70%
Midterm	20%
End of Module	50%

Assessment 1: Histology Assignment

Value: 5% of Final Grade

Due Date: August 15, 2020

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.

Assessment 2: Consolidation Concept Map (15 minute maximum Recorded Presentation)

Value: 10% of Final Grade

Due Date: September 8, 2020 at 11:59 PM

Description: Using a concept map design, organize and link key concepts of the course (basic science/clinical) together to explain a clinical problem that will be assigned to each group. Each group will be expected to present their concept map to the class. The concept map will include a focus question or theme, topics or concepts and linking arrows and words. The concept map and presentation will be assessed using a scoring rubric. Any recording software can be used to present your work. All presentations must be a maximum length of 10 minutes.

Assessment 3: Critical Appraisal Article Analysis Assignment

Value: 7.5% of Final Grade

Due Date: August 21, 2020

Length: 750 words maximum

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.

Assessment 4: Dialysis Visit Personal Reflection Assignment

Value: 7.5%

Due Date: 1 week following your dialysis visit

Length: 500 words maximum

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.

Midterm Exam

Value: 20% of Final Grade

Date: August 27, 2020

Type: Comprehensive In-Class to cover material up to August 17 (inclusive).

Description: Question type 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 up to August 17.

End of Module Exam

Value: 50% of Final Grade

Date: September 14, 2020

Type: Comprehensive

Description: Question type 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 TO ATTEND** as per the Attendance Policy.

COURSE EVALUATION QUALITY IMPROVEMENT

The following changes reflect course quality review recommendations and student feedback:

1. Due to the COVID-19 pandemic, we have had to make significant changes to this year's course. Given the virtual delivery of the curriculum the course has been revised to balance the educational value and needs of the students.

MODULE 2

Musculoskeletal Medicine

MODULE DIRECTORS

Rheumatology: Dr. Regina Taylor-Gjevre

Email Address: r.gjevre@usask.ca

Phone Number: 306-966-6138

Office Location: HSB 3A20

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:

1. 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
2. Describe evidence-informed principles of surveillance and screening for the normal/healthy population and for at risk populations

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>

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/-/media/project/aocmf/aotrauma/documents/education_pdf/orp_handout_english_how-to-read-x-rays.pdf?la=en&hash=3ED5C66F43196E46B69205435C546BD0950A22D8
<https://undergradimaging.pressbooks.com/> (Undergrad Diagnostic Imaging eBook)
<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> (Diagnostic Imaging Roadmap)

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.whelessonline.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

Assessments	6%
Applied Epidemiology Exercise	4%
Case Self-Directed Learning Skills Assessment	
Polyarthritis Cases	1%
Connective Tissue Disease Cases	1%
Exams	94%
Midterm I	22%
Midterm II	22%
End of Module	50%

Assessment 1 Applied Epidemiology Exercise

Value: 4% of Final Grade

Date: October 15, 2020

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: 2% of Final Grade (1% for each of two case sessions)

Dates: Polyarthritis Case Session: September 18, 2020

Connective Tissue Disease Case Session: September 21, 2020

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: 22% of Final Grade

Date: September 25, 2020

Type: Comprehensive In-Class

Description: Question type 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: 22% of Final Grade

Date: October 5, 2020

Type: Comprehensive

Description: Question type 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 19, 2020

Type: Comprehensive

Description: Question type 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](#).

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

COURSE EVALUATION QUALITY IMPROVEMENT

The following changes reflect course quality review recommendations and student feedback:

1. In order to better support student learning for different components within this MSK module, we have increased the distinct clustering of the rheumatology and of the orthopaedic content within the course sequencing.
2. We have modified the introductory sessions to better support student understanding of biomedical principles relating to MSK curriculum.

MODULE 2

Neurosciences

MODULE Co DIRECTORS

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

Neurosciences: Dr. Jennifer Chlan

Email address: jen.chlan@usask.ca

Phone number: (306) 966-6557

Office Location: GB29 Health Sciences Building

Office Hours: contact by e-mail to arrange meeting

MODULE DESCRIPTION

This module will include the study of the central nervous system including health promotion and prevention, epidemiology, anatomy, genetics, pathophysiology, pharmacology diagnosis, prognosis, treatment, and multidisciplinary management 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, headache/migraine, peripheral nerve diseases, neuromuscular disorders, movement disorders, multiple sclerosis, neuroinflammatory disorders, pain, and neuroinfectious diseases. 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 congenital abnormalities of the central nervous system. Finally, the most common ophthalmological conditions will be reviewed.

GENERAL MODULE OBJECTIVES

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

1. Identify the basic localization and lateralization of common neurologic/neurosurgery/pain conditions.
2. Underline principles of health promotion and preventive for the common neurological/neurosurgery/pain/ophthalmology conditions.
3. Select and interpret evidence-based investigations at risk population and identify frequent risk factors/epidemiology in common neurological/neurosurgery/pain/ophthalmology conditions.
4. Construct a differential diagnosis in a patient presenting with acute and common neurological/neurosurgery/pain/ophthalmology conditions across the lifecycle.
5. Select and interpret appropriate evidence-based investigations and be able to interpret them.
6. Outline the initial, ongoing management, and multidisciplinary plan for patients with acute and common neurological/neurosurgery/pain/ophthalmology conditions.
7. Explain the pathogenesis and pathophysiology of acute, common, or urgent neurological/neurosurgery/pain/ophthalmology 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. It will be necessary for the first week of class and is a recommended resource for the remainder of the module:

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

RECOMMENDED RESOURCES

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)

Continuum: Lifelong Learning in Neurology – up to date reviews on numerous topics in neurology. Available online through the usask library website.

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
- Online interactive training module

STUDENT ASSESSMENT

Assessments	15%
Completion of Online Interactive Training Module	15%
Exams	85%
Midterm I	22.5%
Midterm II	22.5%
End of Module	40%

Assessment: Online Interactive Training Module

Value: 15% of Final Grade

Date: Due November 16, 2020

Description: The online interactive training module aims to increase the student's understanding of various neurological conditions. This module provides students the knowledge base necessary to assess the typical presentations of the most common neurological conditions.

Midterm I

Value: 22.5% of Final Grade

Date: October 27, 2020

Type: Comprehensive

Description: Question type may include: multiple choice, multiple choice multiple answer, fill in the blank, true-false, short answer, matching, and extended written questions.

Midterm II

Value: 22.5% of Final Grade

Date: November 10, 2020

Type: Comprehensive

Description: Question type 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: 40% of Final Grade

Date: November 23, 2020

Type: Comprehensive

Description: Question type 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

The following changes reflect course quality review recommendations and student feedback:

1. Topics and session times reviewed to address gaps and redundancies.
 - a. new session added – Approach to a Dizzy Patient
 - b. neurosurgery and ophthalmology topics review to better reflect second year student learning needs
2. Development of new online interactive training module, which will replace previous assignment.
3. A small section addressing addiction and the opioid crisis will be added to Pain block.
4. Access to rural and remote services in Epilepsy and Stroke will be added to each respective lecture.

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-INVOLVEMENT 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 syllabus¹.

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.

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.

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

Each lecturer reserves the right to choose whether or not their lectures will be posted for viewing by students. If a lecture provides consent to share their recording, it will be posted to the course Blackboard site for students to view. Please remember that course recordings belong to your instructor, the University, and/or others (like a guest lecturer) depending on the circumstance of each session, and are protected by copyright. Do not download, copy, or share recordings without the explicit permission of the instructor.

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>)

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>. 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> where there is information for students available at <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, www.students.usask.ca/aes, or contact AES at (306) 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 please contact:

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

COM and the School of Rehabilitation Science Coordinator (Saskatoon), Bev Digout at bev.digout@usask.ca or 306-966-8224

Administrative Assistant, Chelsea Malkowich (Saskatoon) at chelsea.malkowich@usask.ca or (306) 966-7331

COM Student Affairs Coordinator (Regina), Lisa Persaud at lisa.persaud@saskhealthauthority.ca or (306) 766-0620

Student Affairs Director, Dr. Nicole Fahlman (Regina) at nicole.fahlman@usask.ca or (306) 209-0142

Student Affairs Director, Dr. Tiann O'Carroll (Regina) at tiann.ocarroll@usask.ca or (306) 529-0777

Administrative Assistant (Regina), Jennie Antal at jennie.antal@saskhealthauthority.ca or (306) 766-0553

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, bringing 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.