Foundations in Clinical Medicine I

MEDC 126.18

YEAR 1 TERM 2

COURSE SYLLABUS
2021/2022

UNIVERSITY OF SASKATCHEWAN
College of Medicine
MEDICINE.USASK.CA

LAND ACKNOWLEDGEMENT

As we engage in Remote Teaching and Learning, we acknowledge we are on Treaty Six and Treaty Four 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 I – Course Overview

REMOTE LEARNING CONTEXT

To address uncertainties related to delivering academic programming during a pandemic, some instructors may deem it necessary to revise syllabi in ways that impact assignments, assessments, and weighting of grades, among other things. Such changes will be permitted if they have been approved by the Department Head (in a departmentalized college) and by the Dean/Executive Director or designate within a College/School. This provision is temporary and will be reviewed by the Academic Programs Committee at the beginning of each semester until any permanent change in this regard is approved by Council.

If you are on campus at any time, ensure you know what is required and expected of you: One of the critical lessons learned in dealing with COVID-19 is knowing that situations can change and we must be flexible and ready to adjust our safety protocols. Instead of listing all of the relevant information in your course outline, the university has created a webpage where all up-to-date information around returning to campus is listed.

You are responsible for regularly checking the health and *safety* guidelines https://covid19.usask.ca/about/safety.php#Expectations and knowing what is expected of you throughout the winter term. The College of Medicine has specific COVID protocols that are also important for you to be aware of and follow on the College of Medicine website.

COURSE DESCRIPTION

The Foundations in Clinical Medicine Courses run over Terms 2, 3, and 4 and incorporate the eleven human body systems modules. The four modules explored in the Foundations of Clinical Medicine I (Term 2) Course include: Gastrointestinal, Respiratory, Cardiovascular, and Hematology Medicine. 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.

Completion of this course will help you attain elements of your overall undergraduate program objectives (Program Learning Objectives).

COURSE PREREQUISITES

A student must have successfully completed Principles of Biomedical Science (MEDC 115.18) or be conditionally promoted and engaged in a program of remediation for the MEDC 115.18 course as approved by the Undergraduate Education Committee prior to the start of the Foundations of Clinical Medicine I course.

OVERALL COURSE OBJECTIVES

Building on their knowledge from MEDC 115.18 of normal anatomy, histology and physiology, 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 evidence-based management plans.
3. Select and interpret appropriate evidence-based 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.

More information on the Academic Courses Policy on course delivery, examinations and assessment of student learning can be found at: http://policies.usask.ca/policies/academic-affairs/academic-courses.php NOTE: The College of Medicine a specific policies and procedures for course delivery, exams and assessment that can found on the Policies, Procedures and Forms page of the College of Medicine website.

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. Matt Wong – msw932@mail.usask.ca (306) 966-6138 c/o Cheryl Pfeifer

Co-Chair (Assessment) – Dr. Kelsey Brose - 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 I Course is organized in 4 modules running sequentially on specific assigned days. Session schedules for each of the modules will be posted in one45.

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

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 in one45. The syllabus, forms, and other useful documents will be posted there. In some modules, Canvas will be used for submission of assignments.

RESOURCES

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

1. A general medicine text such as Harrison's Principles of Internal Medicine by Kasper et al (ISBN: I 978-0-07-1802161 for e-book). Edition: 19.

2. A general surgical text such as Sabiston Textbook of Surgery by Townsend C (ISBN 978-1-4377-1560-6). Edition: 19 or Current Diagnosis and Treatment – Surgery by Doherty G (ISBN 978-0-07-179211-0). Edition: 14.

3. A general pediatrics text such as Nelson Essentials of Pediatrics by Marcdante, Karen J (ISBN: 978-1-4557-5980-4). Edition: 7 or Rudolph's Pediatrics by Rudolph C. et al. (ISBN: 9780071790376). Edition: 22.

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

Physiology

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

Histology

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

OR

Histology: A Text and Atlas (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/

Textbooks are available online from the University of Saskatchewan Bookstore: https://bookstore.usask.ca/students.php#MyTextbooks

COURSE ASSESSMENT OVERVIEW

Course Component	Module Components	Module Weight	Component Requirement	Weighting in Final Foundations I Mark
Gastrointestinal Module	Histology Assignment	5%	70% on module	25%
	Clinical Practice Guidelines Assign	5%		
	Colonic Assignment	5%		
	Imaging Assignment	5%		
	Mid-Module Exam	30%		
	End-of Module Exam	50%		
Respiratory Module	Quiz I	10%	70% on module	25%
	Quiz II	10%		
	Histology Assignment	5%		
	Palliative Care Assignment	5%		
	Mid-Module Exam	25%		
	End of Module Exam	45%		
Cardiovascular Module	Patient Voice Assignment	3%	70% on module	25%
	NNT Assignment	3%		
	ECG On-Line Module	9%		
	ECG Canvas Quiz	5%		
	Intro to CV Quiz	5%		
	Mid-Module Exam	30%		
	End of Module Exam	45%		
Hematology Module	3 Assignments (3% each)	9%	70% on module	25%
	3 Unit Exams (18% each)	54%		
	End of Module Exam	37%		
Course Total Mark				100%
Foundations I Final Exam *			60% on exam	

* The Foundations I Final exam is a cumulative exam and tests clinical application of content from Foundations I. 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 may 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.

MIDTERM AND FINAL EXAMINATION SCHEDULING

Midterm and final examinations must be written on the date scheduled.

Students should avoid making prior travel, employment, or other commitments for in-term exams and final exams. If a student is unable to write an exam through no fault of their own for medical or other valid reasons, they should refer to the College of Medicine Deferred Exam policy and procedure.

RUBRICS

Where applicable, rubrics for all assignments will be posted on one45 for the relevant session. For those assignments submitted via Canvas they are also posted in Canvas. In the event of a discrepancy between the two versions, that posted on Canvas 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 four modules within the Foundations I course (Gastrointestinal, Respiratory, Cardiovascular and Hematology Medicine Modules). Students must also achieve a minimum grade of 60% in the Foundations Final Examination for Foundations I. 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 I Course are listed below. Please note that students must meet the overall Term 2 promotion standards in order to be promoted to Year 2 (see Student Information Guide).

A) Students will be considered to have successfully completed the Foundations I Course if they have achieved a minimum 70% average grade in each of the four modules and a minimum 60% grade on the end of term Foundations I 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 I 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 four modules or a 60% grade in the Foundations I 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 I Final Exam (see Table 1 for grade deficit point allocation rubric). Students accumulating 2 or more deficit points at any point during the 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); 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 should 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 I Final 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), or the number of failed modules. Students who have **accrued a total of four (4) or more** grade deficit points or accrued deficit points in **three (3)** separate modules within Foundations I will be considered to have been unsuccessful in the Foundations I 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 1 (Term 2) 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 May. 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 I Final Exam will be held mid-June. Where students have supplemental exams 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 assessments will be scheduled after the final exam period and will be scheduled by the UME office. Supplemental assessments will ONLY be offered on scheduled dates unless there are exceptional circumstances (such as personal illness, bereavement, etc.). In cases of exceptional circumstances, students should follow the Deferred Exam Procedure to request adjustment of their schedule. Exceptions will not be made for personal travel, and students will be required to adjust personal travel arrangements

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 I 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 I course. Further decisions regarding academic outcomes will be adjudicated by the Year 1 (Term 2) 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, 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.

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 I Final Exam).

K) Grade deficit points will not appear on the student's transcript, nor are they transferred to any other course in the UME 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 ≥ 60%	< 60% and ≥ 50%	<50%
Gastrointestinal Module	I	II	III
Respiratory Module	I	II	III
Cardiovascular Module	I	II	III
Hematology Module	I	II	III
Foundations I 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.

ASSESSMENT REVIEW

Course or Module Directors will provide all students with a summary of post-examination learning points focusing on clarification of concepts where significant numbers of students appeared to have difficulty. Actual examination papers will not be made available to all students; however, in the event of specific module or examination failure students may work with the academic support team and the module/course leaders to review their examination performance and discuss concepts that students may be struggling with.

IMPORTANT GUIDELINES FOR THIS TRANSITION TERM

During this transition term it is important that we undertake in-person elements of this class safely. In order to do this the university has developed a set of expectations and safety protocols that all students must adhere to if they are to engage in in-person activity.

Throughout the Term:

- **Protect the Pack:** Right now, the impact of student choices and activities when not on campus cannot be separated from time spent on campus. In order to "protect the pack", the university is asking all students who are doing in-person work to be mindful and do whatever possible to lower the risk that you will contract COVID-19 and bring it onto campus.

- **Know what is Required and Expected of You:** One of the critical lessons learned in dealing with COVID-19 is knowing that situations can change and we must be flexible and ready to adjust our safety protocols. Instead of listing all of the relevant information in your course outline, the university has created a webpage where all up-to-date information around returning to campus is listed. **You are responsible** for **regularly** checking the health and safety guidelines https://covid19.usask.ca/about/safety.php#Expectations and knowing what is expected of you throughout the fall term.

- **Follow all Guidance:** Students are expected to follow all guidance provided by the University's Pandemic Recovery/Response Team (PRT), College/Department, professors, lab instructors, TAs, and any other staff member involved in the in-person academic program activities (e.g., Protective Services, Safety Resources).

- **Key Channels of Communication**: If there is a need for the class to pause meeting in-person for a period of time you will be notified. If this occurs, you will be provided with detailed information on what you will need to do in place of the in-person class sessions (e.g., read content posted in Canvas, complete learning activities in Canvas).

Foundations in Clinical Medicine I – 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 I Course.

MODULE 1

Gastrointestinal

MODULE DIRECTOR

Dr. Edward Ha

Email: eddy.ha@usask.ca

Phone Number: (306) 844-1002

Office Location: RUH 2658

Office Hours: Please contact to arrange a meeting

MODULE DESCRIPTION

The Gastrointestinal module is designed to provide to the undergraduate medical student an overview of the normal function and structure of the gastrointestinal system. The module also provides a learning experience to understand how common disease processes may affect the GI system to create gastrointestinal illness. The symptoms and the clinical approach to these symptoms will be provided along with discussion of specific common GI illnesses. This will be accomplished by a combination of traditional lectures on common GI complaints along with lectures on specific diseases. Small group sessions will be held to apply the knowledge learned in the formal lectures using case discussions.

MODULE OBJECTIVES

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

1. Describe the normal function of the gastrointestinal tract and how the system can be affected by disease processes to create clinical illness.
2. Develop an approach to the differential diagnosis of common and serious GI presentations.
3. Describe common and serious GI conditions including their epidemiology and clinical features including history and physical findings.
4. Select and interpret testing for appropriate screening, surveillance and diagnosis of GI conditions.
5. Describe management of common GI conditions.

MODULE SCHEDULE

All information relating to this course is available in one45. Please check one45 **DAILY** to ensure that you have the most current schedule information.

REQUIRED RESOURCES

First Principles of Gastroenterology and Hepatology in Adults and Children
(Note: this is an on-line textbook which is free to download at: www.giandhepatology.com)

Students will benefit from preparation prior to sessions. This is expected prior to the small group interactive discussions. Further individual session resources and pre-readings may also be posted within One45.

MODULE DELIVERY

Students will learn through a variety of methods, including:

- Large group didactic lectures
- Interactive small group learning sessions
- Independent self-directed reading and exercises including assignments

STUDENT ASSESSMENT

Assessments	**20%**
Histology Assignment	5%
Clinical Practice Guidelines Assignment	5%
Colonic Diverticulosis Assignment	5%
Imaging Assignment	5%

Exams	**80%**
Mid-Module	30%
End of Module	50%

Assessment 1: Histology Assignment

Value: 5% of Final Grade

Due Date: January 23, 2022

Description: Exploration of gastrointestinal histology knowledge through short answers in take-home format.

Assessment 2: Clinical Practice Guideline Assignment

Value: 5% of Final Grade

Due Date: January 12, 2022

Description: Assignment to solidify learning around previously presented material and to introduce the application of guidelines and evidence-based medicine to clinical practice.

Assessment 3: Colonic Diverticulosis Assignment

Value: 5% of Final Grade

Due Date: January 19, 2022

Description: Assignment to solidify learning around colonic diverticulosis.

Assessment 4: Imaging Assignment

Value: 5% of Final Grade

Due Date: January 28, 2022

Description: Assignment to solidify learning around imaging related to GI conditions.

Mid-Module Exam

Value: 30% of Final Grade

Date: January 14, 2022

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 and including January 12, 2022.

End of Module Exam

Value: 50% of Final Grade

Date: January 31, 2022

Description: Based on ALL module content, weighted more heavily on content not covered on mid-module exam. 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 and including January 28, 2022.

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

COURSE EVALUATIONS QUALITY IMPROVEMENT

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

1. Further opportunities for application of material to clinical scenarios.
2. Dedicated review sessions and exam preparation.

MODULE 2

Respiratory

MODULE CO-DIRECTORS

Dr. Chung Chun (Anderson) Tyan

Email Address: cht995@mail.usask.ca

Phone Number: (306) 956-3444 (Ext 2)

Office Location: 420-210 Ave P S

Office Hours: please contact to arrange a meeting

Dr. Jared Diederichs

Email Address: j.diederichs@usask.ca

Phone Number: c/o Cheryl Pfeifer (306) 966-6138

Office Location: 200-3211 Preston Ave S

Office Hours: please contact to arrange a meeting

MODULE DESCRIPTION

This module will include the study of respiratory related physiology in addition to the pathophysiology, diagnosis, prognosis and treatment of respiratory related diseases. Students will develop a clinical approach for patients with common and urgent thoracic/respiratory system problems including upper and lower airway, pleural and parenchymal disease/disorders/trauma/malignancies. Major vertical themes will be emphasized including public health implications related to respiratory diseases.

MODULE OBJECTIVES

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

1. Construct a differential diagnosis in a patient presenting with airway/thoracic/respiratory abnormalities.
2. Order and interpret appropriate investigations.
3. Outline a management plan for patients with an airway/thoracic/respiratory disease/disorder.
4. Explain the pathogenesis and pathophysiology of common or urgent respiratory/thoracic diseases/disorders.

MODULE SCHEDULE

All information relating to this course is available in one45. Please check one45 **DAILY** to ensure that you have the most current schedule information**.**

REQUIRED RESOURCES

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

West JB (J Burnard), Luks A. West's Pulmonary Pathophysiology: The Essentials. New York: Woulters Kluwer, 2017.

Additional resource materials recommended to students include:

Online lectures by J.B. West: https://meded.ucsd.edu/ifp/jwest/resp_phys/

Kasper D, Fauci, A, Hauser S, Longo D, Jameson JL, Loscalzo J. Harrison's principles of internal medicine (19th ed.) New York: McGraw-Hill, 2015. Available online at https://sundog.usask.ca/record=b3724955~S8.

Chapter Nine of the Undergraduate Imaging addresses CXR https://undergradimaging.pressbooks.com/front-matter/introduction/

Acid-Base Workbook (See materials posted under Session One of this module in One45). *this workbook include in depth renal causes of acid-base disorder and it not examined in the respiratory module.

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

MODULE DELIVERY

Students will learn through a variety of methods, including:

- Large group didactic session with case-based questions within the session
- Interactive small group case-based learning sessions,
- Independent self-directed reading and exercises,
- Histology laboratory experience with virtual microscopy slides

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.

STUDENT ASSESSMENT

Assessments	**30%**
Quiz I	10%
Quiz II	10%
Histology Assignment	5%
Palliative Care Assignment	5%
Exams	**70%**
Mid-Module	25%
End of Module	45%

Assessment 1: Histology Assignment

Value: 5% of Final Grade

Due Date: February 7, 2022

Description: Take home quiz downloaded and submitted through Canvas.

Assessment 2: Quiz I

Quiz Value: 10% of Final Grade

Posting Date: February 4, 2022

Due Date: February 8, 2022

Description: On-line quiz covering physiology, ABGs, CXRs and PFTs.

Assessment 3: Quiz II

Quiz Value: 10% of Final Grade

Posting Date: February 14, 2022

Due Date: February 18, 2022

Description: On-line quiz covering all material on adult Respirology topics from February 9 to February 17, 2022.

Assessment 4: Palliative Care Assignment

Value: 5% of Final Grade

Due Date: February 15, 2022

Description: Narrative responses to questions related to palliative care following the Asthma and COPD Case Study. Your assignment is to be posted on Canvas. Assignments will be graded by small group tutors according to the posted rubric.

Mid-Module Exam

Value: 25% of Final Grade

Date: February 14, 2022

Description: Comprehensive 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 and including February 11, 2022.

End of Module Exam

Value: 45% of Final Grade

Date: March 7, 2022

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

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

COURSE EVALUATIONS FOR QUALITY IMPROVEMENT

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

1. Content added regarding the impacts of climate change on respiratory health, including didactic lecture and small group cases.
2. Module directors will offer weekly optional virtual review sessions.
3. Didactic lectures will continue to be delivered as either live in person or pre-recorded.
4. Content on COVID 19 added/updated.

MODULE 3

Cardiovascular

MODULE CO-DIRECTORS

Dr. Desiree Rouleau

Email Address: desiree.rouleau@usask.ca

Phone Number: please use email to contact

Office Location: RUH Emergency Physician Office

Office Hours: please contact to arrange meetings

Dr. Mike Cenkowski

Email Address: c/o cheryl.pfeifer@usask.ca

Phone Number: please use email to contact

Office Hours: please contact to arrange meetings

MODULE DESCRIPTION

This module will include the study of cardiovascular related anatomy and physiology in addition to the pathophysiology, diagnosis, prognosis and treatments of cardiovascular related diseases. Students will develop a clinical approach for patients with common and urgent/emergent cardiac and vascular related problems including peripheral vascular, ischemic, dysrhythmic, valvular, inflammatory and pediatric congenital disease/disorders. Major vertical themes will be emphasized including preventative medicine implications related to cardiovascular diseases.

MODULE OBJECTIVES

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

1. Construct a differential diagnosis for a patient presenting with cardiovascular related symptomatology or abnormalities.
2. Order appropriate medical investigations and be able to interpret them.
3. Outline a management plan for patients with cardiovascular related disease/disorders.
4. Explain the pathogenesis and pathophysiology of common or urgent/emergent cardiac and/or vascular related diseases/disorders.
5. Describe evidence-based approaches to primary and secondary prevention of cardiovascular disease.

MODULE SCHEDULE

All information relating to this course is available in one45. Please check one45 **DAILY** to ensure that you have the most current schedule information.

RECOMMENDED RESOURCES

(* denotes available at the Leslie and Irene Dubé Health Sciences Library)

Pathophysiology of Heart Disease: An introduction to cardiovascular medicine. (2020), Lilly L. *

The Only EKG Book You'll Ever Need. (2019), Thaler, M. *

A case workbook of electrocardiograms and clinical cases for use in small group sessions will be provided to each student via One45.

ECG Module at teachingmedicine.com – students will be contacted early in the Foundations course to be enrolled in the on-line course to be able to access the ECG module at www.teachingmedicine.com

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

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

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.

STUDENT ASSESSMENT

Assessments	**25%**
Patient Voice Assignment	3%
ECG On-Line Module Assignment	9%
Number Needed to Treat Assignment	3%
Introduction to CV Quiz	5%
ECG Quiz	5%
Exams	**75%**
Mid-Module	30%
End of Module	45%

*Assessment 1: Number Needed to Treat Assignment**

Value: 3% of Final Grade

Due Date: March 17, 2022

Description: Following the in-class presentation, complete on-line assignment using the Number Needed to Treat (NNT) concept. This session will be mandatory as per Attendance policy.

*Assessment 2: Patient Voice Assignment **

Value: 3% of Final Grade

Due Date: April 7, 2022

Description: In short answer format, reflect upon insight gained into CV patient experience. This will be an in-class assessment, mandatory as per Attendance policy.

Assessment 3: ECG On-Line Module Participation

Value: 9% of Final Grade

6% of the final grade will be awarded through completion of the assigned modules.

3% of the final grade will be scored through the online ECG In-Class Quiz.

Due Date: Module Completion: April 8, 2022 at 11:59 pm

In-Class Quiz: March 30, 2022

Description: On-line module participation to build understanding of ECGs and improve comfort with interpreting ECGs. Available at: teachingmedicine.com.

Quiz 1: *Introduction to CV*

Value: 5% of Final Grade

Date: March 17, 2022

Description: In-class quiz on basic sciences and principles of cardiovascular disease. On materials from March 2 up to and including March 6.

Quiz 2: *ECG Canvas Quiz*

Value: 5% of Final Grade

Date: April 1, 2022

Description: Canvas exam to strengthen interpretation skills for common and important ECGs.

Mid-Module Exam

Value: 30% of Final Grade

Date: March 22, 2022

Description: Questions on basic sciences of cardiology, hypertension, peripheral vascular disease, and ischemic heart disease.

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 and including CAD cases March 18.

End of Module Exam

Value: 45% of Final Grade

Date: April 11, 2022

Description: Comprehensive questions on full course content, weighted slightly more heavily to those topics not on the midterm, including dysrhythmia, heart failure, valvular disease and pediatric heart disease.

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 and including April 8.

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

* In-class assessments – these sessions will be mandatory as per Attendance Policy.

COURSE EVALUATIONS QUALITY IMPROVEMENT

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

1. Pre-reading assignments for each lecture will be provided to help establish a foundation for the lecture content and to emphasize key concepts in cardiovascular medicine.
2. Each lecture will contain at least 1 practice exam question that will be reflective of typical exam questions.
3. Content provided in the heart failure/cardiomyopathy lectures will be simplified and taught by fewer lecturers, to improve continuity and reduced material overlap.

MODULE 4

Hematology

MODULE DIRECTOR

Dr. Kelsey Brose

Email Address: kelsey.brose@saskcancer.ca

Phone Number: (306) 655-1483

Office Location: RUH 2609

Office Hours: please contact for meeting

MODULE DESCRIPTION

Hematology is the study of blood and blood diseases. This module will include the study of the physiology of blood/hematologic system components in addition to the pathophysiology, diagnosis, prognosis and treatment of blood related diseases. Through lectures and cases, students will develop a clinical approach to common hematologic problems including anemia, bleeding disorders, hereditary and acquired thrombotic disorders, lymphadenopathy, splenomegaly, hematologic malignancies and transfusion medicine.

MODULE OBJECTIVES

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

1. Construct a differential diagnosis in a patient presenting with hematologic related abnormalities.
2. Order appropriate investigations and be able to interpret them.
3. Outline a management plan for patients with a hematological disease/disorders.
4. Explain the pathogenesis and pathophysiology of common or urgent hematologic disorders.
5. Describe evidence-informed principles of surveillance and screening for selected hematological conditions.

MODULE SCHEDULE

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

REQUIRED RESOURCES

Lecture notes are designed to be comprehensive enough for most purposes. Students wishing to deepen their understanding can refer to the supplemental textbooks listed below.

Supplemental Resources:

Essential Hematology (Wiley-Blackwell, 8th edition)

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

MODULE DELIVERY

Students will learn through a variety of methods, including:

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

Interactive small group learning sessions

Independent self-directed reading and exercises

STUDENT ASSESSMENT

Assignments	**9%**
Unit 1 Assignment - Anemia	3%
Unit 2 Assignment - Hemostasis, Thrombosis, Transfusion	3%
Unit 3 Assignment – Malignant Hematology	3%

Exams	**91%**
Unit 1 Exam – Anemia	18%
Unit 2 Exam - Hemostasis, Thrombosis, Transfusion	18%
Unit 3 Exam – Malignant Hematology	18%
End of Module	37%

Assignments

Value: 9% of Final Grade - three assignments worth 3% each

Due Date: Due dates can be found in One45

Description: Each assignment will contain several common/important patient scenarios. Students will be asked to classify each scenario using common descriptors, for example: acute vs chronic, acquired vs congenital, normal vs abnormal. Based on this classification, students will be asked to provide a brief differential diagnosis.

Unit 1 Exam: *Anemia*

Value: 18% of Final Grade

Date: April 18, 2022

Description: Tests the student's knowledge of normal blood formation, as well as the approach to a patient with anemia.

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

Unit 2 Exam: *Hemostasis, Thrombosis and Transfusion Medicine*

Value: 18% of Final Grade

Date: April 25, 2022

Description: Tests the student's knowledge of normal coagulation, the basics of blood banking, as well as the approach to a patient presenting with bleeding or clotting abnormalities.

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

Unit 3 Exam: *Malignant Hematology*

Value: 18% of Final Grade

Date: April 29, 2022

Description: Tests the student's approach to the patient presenting with lymphadenopathy, splenomegaly, or other findings suggestive of a hematologic malignancy.

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: 37% of Final Grade

Date: May 4, 2022

Description: A comprehensive exam of all the hematology module objectives.

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

COURSE EVALUATIONS QUALITY IMPROVEMENT

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

1. Assignments will be introduced for each unit.
2. Reinstate small groups, pandemic restrictions allowing.

IMPORTANT AND RELEVANT STUDENT INFORMATION

The following information is extremely important for your success in medical school. Please refer to the UME Policies page and the Student Information Guide for the following policies:

UME 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 RPOVIDERS IN STUDENT ASSESSMENT

APPEALS PROCEDURES

STUDENT DISCRIMINATION, HARRASSMENT, AND MISTREATMENT PROCEDURE

ACCOMMODATION OF STUDENTS WITH DISABILITIES

OFFICE OF STUDENT AFFAIRS

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

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. All due dates or timelines for assignment submission are published in the student course syllabus. In the event of a general service disruption on Canvas at the time an assignment is due, they are to be submitted by 0900 the following morning.

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 Pre-Clerkship Coordinator in Regina for years 1-2. Years 3-4 must submit to the Rotation Coordinator. The student, if submitting a late assignment that is deemed to be at or above the pass mark for that assignment will receive the pass mark for the assignment. If it is assessed as below the pass mark, the student will receive the actual grade assigned for the assignment.

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

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

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

CITATION FORMAT

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

RECORDING OF THE LECTURES

Most lectures will be recorded and posted to the course Canvas site under Panopto Video. 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 rather to enhance understanding of the concepts.

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.

For questions about recording and use of sessions in which you have participated, including any concerns related to your privacy, please contact the UME administrative coordinator for this course. More information on class recordings can be found in the Academic Courses Policy https://policies.usask.ca/policies/academic-affairs/academic-courses.php#5ClassRecordings

REQUIRED VIDEO USE

At times in this course you may be required to have your video on during video conferencing sessions, in order to support observation of skills, to support group learning activities, or for exam invigilation. It will be necessary for you to use of a webcam built into or connected to your computer.

For questions about use of video in your sessions, including those related to your privacy, contact your instructor.

COPYRIGHT

Course materials are provided to you based on your registration in a class, and anything created by your 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 you 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 you copy or distribute others' copyright-protected materials, please ensure that your 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)

Although learning in a remote context is different, the rules and principles governing academic integrity remain the same. If you ever have questions about what may or may not be permitted, ask your instructor. Students have found it especially important to clarify rules related to exams administered remotely and to follow these carefully and completely.

The University of Saskatchewan is committed to the highest standards of academic integrity (https://academic-integrity.usask.ca/). Academic misconduct is a serious matter and can result in grade penalties, suspension, and expulsion.

Prepare for Integrity
Students are expected to act with academic integrity.

- Students are encouraged to complete the Academic Integrity Tutorial to understand the fundamental values of academic integrity and how to be a responsible scholar and member of the USask community (tutorial link: https://libguides.usask.ca/AcademicIntegrityTutorial)
- Students can access campus resources that support development of study skills, time and stress management, and ethical writing practices important for maintaining academic integrity and avoiding academic misconduct.

Responses to Misconduct

Students are expected to be familiar with the academic misconduct regulations (https://governance.usask.ca/student-conduct-appeals/academic-misconduct.php#About).

- Definitions appear in Section II of the academic misconduct regulations.
- The academic misconduct regulations apply regardless of type of assessment or presence of supervision during assessment completion.
- Students are advised to ask for clarification as to the specific expectations and rules for assessments in all of their courses.
- Students are urged to avoid any behaviour that could result in suspicions of cheating, plagiarism, misrepresentation of facts. Students should note that posting copyrighted course materials (e.g., notes, questions, assignments or exams) to third party websites or services or other forum or media without permission is an academic or non-academic misconduct offense.

Non-academic offenses are dealt with under the Standard of Student Conduct in NonAcademic Matters and Regulations and Procedures for Resolution of Complaints and Appeals.

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 (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.

RECOMMENDED TECHNOLOGY FOR REMOTE LEARNING

Students are reminded of the importance of having the appropriate technology for remote learning. The list of recommendations can be found at https://students.usask.ca/remote-learning/tech-requirements.php.

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, Kacia Whilby (Saskatoon) at kacia.whilby@usask.ca or (306) 966-7331

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' website http://students.usask.ca.

ACADEMIC HELP FOR STUDENTS

The University Library offers a range of learning and academic support to assist USask undergrad and graduate students. For information on specific services, please see the Learning page on the Library web site https://library.usask.ca/support/learning.php

Remote learning support information https://students.usask.ca/remote-learning/index.php

Class and study tips https://students.usask.ca/remote-learning/class-and-study-tips.php

Remote learning tutorial https://libguides.usask.ca/remote_learning

Study skills materials for online learning https://libguides.usask.ca/studyskills

A guide on netiquette, principles to guide respectful online learning interactions https://teaching.usask.ca/remote-teaching/netiquette.php

TEACHING, LEARNING AND STUDENT EXPERIENCE

Teaching, Learning and Student Experience (TLSE) provides developmental and support services and programs to students and the university community. For more information, see the students' web site http://students.usask.ca.

FINACIAL 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.

INTERNATIONAL STUDENT AND STUDY ABROAD CENTRE

The International Student and Study Abroad Centre (ISSAC) supports student success and facilitates international education experiences at USask and abroad. ISSAC is here to assist all international undergraduate, graduate, exchange and English as a Second Language students in their transition to the University of Saskatchewan and to life in Canada. ISSAC offers advising and support on matters that affect international students and their families and on matters related to studying abroad as University of Saskatchewan students. Please visit students.usask.ca or updates.usask.ca for more information.

RECOMMENDED TECHNOLOGY FOR REMOTE LEARNING

Students are reminded of the importance of having the appropriate technology for remote learning. The list of recommendations can be found at https://students.usask.ca/remote-learning/tech-requirements.php.

Remember, there are **many supports available** to help you thrive in the remote learning context.