



# Foundations in Clinical Medicine I

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MEDC 126.18

YEAR 1 TERM 2

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 **COURSE SYLLABUS**  
2018/2019



UNIVERSITY OF SASKATCHEWAN  
College of Medicine  
MEDICINE.USASK.CA

## Foundations in Clinical Medicine I – Course Overview

### COURSE DESCRIPTION

The Foundations in Clinical Medicine Courses run over Terms 2, 3, and 4 and incorporate the eleven human body systems modules. The 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. Describe evidence-informed principles of surveillance and screening for the normal/healthy population and for at risk populations.

**Note:** 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](http://www.usask.ca/university_secretary/LearningCharter.pdf).

### COURSE CONTACTS

Course Chairs: Dr. Jennifer Chlan - [jen.chlan@usask.ca](mailto:jen.chlan@usask.ca) (306) 966-6557

Dr. Jackie Perrot – [jackie.perrot@usask.ca](mailto:jackie.perrot@usask.ca) (306) 966-6138

Co-Chair (Assessment) – Dr. Kelsey Brose - [kelsey.brose@saskcancer.ca](mailto:kelsey.brose@saskcancer.ca) (306) 655-1483

Administrative Coordinator: Cheryl Pfeifer - [cheryl.pfeifer@usask.ca](mailto: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, BBLearn (Blackboard) will be used for submission of assignments.

## RESOURCES

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

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

1. A general medicine text such as Harrison's Principles of Internal Medicine by Kasper et al (ISBN: 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, you should be regularly referring to your Principles Course texts to assist you with basic sciences content in the Foundations Course:

### **Physiology**

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

### **Histology**

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

OR

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

### **Embryology**

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

### **Anatomy** - One of:

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

Grant's Atlas of Anatomy [978 0781796125]

Netters Atlas of Human Anatomy [9781455704187]

### **Pharmacology**

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

### **Microbiology**

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

### **Immunology**

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

### **Pathology**

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

### **Diagnostic Imaging**

<http://sites.usask.ca/undergradimaging/>

## COURSE ASSESSMENT OVERVIEW

Course Component	Module Components	Module Weight	Component Requirement	Weighting in Final Foundations I Marks
Gastrointestinal Module	Histology Assignment	5%	70% on module	25%
	Nausea and Vomiting Assign	5%		
	Colonic Assignment	5%		
	Crossword Assignment	5%		
	Mid-Module Exam	30%		
	End-of Module Exams	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	Assignments x2 (3% each)	6%	70% on module	25%
	ECG On-Line Module	9%		
	ECG Blackboard Quiz	5%		
	Intro to CV Quiz	10%		
	Mid-Module Exam	25%		
	End of Module Exam	45%		
Hematology Module	3 Quizzes (20% each)	60%	70% on module	25%
	End of Module Exam	40%		
Course Total Mark				100%
Foundations I Final Exam			60% on exam	

### COURSE POLICY FOR SUCCESSFUL COMPLETION & REMEDIATION

For successful course completion for the purposes of promotion, students must achieve a minimum grade of 70% in each of the 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. The Foundations I Final Examination will include both multiple choice questions and clinical decision making problems. Students not promoted as a result of being unsuccessful on the course will receive a grade of "F" on their transcripts.

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

The requirements for successful completion of the Foundations 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 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 course will be deemed to be experiencing academic difficulty. The severity of academic difficulty will be based on the weighted grade deficit assessment. Students in academic difficulty will be required to meet with a course sub-committee of at least 2 people (made up of Course Chairs(s); relevant Module Director(s); Year Chair or designates) to discuss ways to improve academic performance. The goal of such a meeting is not meant to be punitive, but should be student-centered, and focused on the success and well-being of the student. With any further accrual of deficit points, the student will be required to again meet with the course sub-committee.
- D) Students who have failed a module or the Foundations 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 four (4) or more** grade deficit points or accrued deficit points in **three (3)** modules in 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 retains the right to determine the specific type of remediation needed for each individual student. This remediation may be in the form of additional assignments, assigned readings, meetings with the module director and/ or supplemental examinations as determined by the module director and/ or course chair(s). The remediation timeline will begin once the student has been notified of failure in a module or the Foundations I Final. A remediation plan will be arranged between the module director and student, which will be carried out from the beginning of the remediation timeline until the date of the supplemental exam.
- F) Supplemental examinations will only be scheduled after the final exam period in 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 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 offered on dates other than those specified for each module and for the Foundations I Final Exam in exceptional circumstances (such as personal illness, bereavement, etc.), and will be adjudicated by the Course Sub-Committee in consultation with Assistant Dean Academic. Exceptions will not be made for personal travel, and students will be required to adjust personal travel arrangements. Decisions regarding academic outcomes will be adjudicated by the Year 1 (Term 2) 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 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 a mandatory assignment 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 end of May; however, alternative earlier due dates may be arranged between student and module director.
- 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 the next Foundations course.

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

**Table I: Grade Deficit Point Allocation**

	Overall grade achieved in module before remediation		
	Average < 70% and $\geq$ 60%	Average < 60% and $\geq$ 50%	Average < 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

## 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 Address: [eddy.ha@mail.usask.ca](mailto:eddy.ha@mail.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. Recognize the presenting symptoms of GI illness and have an approach to the differential diagnosis and management of the presenting problem.
3. Order and interpret appropriate testing for GI illness.
4. Describe common GI illnesses including their presentation, management and therapy.

##### 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](http://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

<b>Assessments</b>	<b>20%</b>
Histology Assignment	5%
Nausea and Vomiting Assignment	5%
Colonic Diverticulosis Assignment	5%
Crossword Assignment	5%
<b>Exams</b>	<b>80%</b>
Mid-Module	30%
End of Module	50%

### *Assignment 1: Histology Assignment*

Value: 5% of Final Grade

Due Date: January 25, 2019

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

### *Assignment 2: Nausea and Vomiting Exercise*

Value: 5% of Final Grade

Due Date: January 8, 2019

Description: Assignment to solidify learning around nausea and vomiting.

### *Assignment 3: Colonic Diverticulosis Exercise*

Value: 5% of Final Grade

Due Date: January 16, 2019

Description: Assignment to solidify learning around colonic diverticulosis.

### *Assignment 3: Crossword Assignment*

Value: 5% of Final Grade

Due Date: January 25, 2019

Description: Assignment to solidify learning around GI topics.

### *Mid-Module Exam*

Value: 30% of Final Grade

Date: January 14, 2019

Description: Closed-book 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 10, 2019.

### *End of Module Exam*

Value: 50% of Final Grade

Date: January 28, 2019

Description: A closed-book examination 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 24, 2019.

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

## **COURSE EVALUATIONS QUALITY IMPROVEMENT**

As a result of feedback from previous student evaluations of this module, the following changes have been made.

1. Foundations I has been rescheduled (GI, Resp, CV, Heme) in order to better align with students' clinical skills sessions. We anticipate this will help students consolidate information across the two courses.
2. The GI midterm exam review session will occur closer to the exam to help clarify areas of confusion.
3. GI small group sessions are very well received and will continue.

## MODULE 2

### Respiratory

#### MODULE CO-DIRECTORS

##### Dr. Donna Goodridge

Email Address: [donna.goodridge@usask.ca](mailto:donna.goodridge@usask.ca)

Phone Number: (306) 966-4209

Office Location: HSB B523

Office Hours: please contact to arrange a meeting

##### Dr. Chung Chun (Anderson) Tyan

Email Address: [cht995@mail.usask.ca](mailto: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

#### 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 appropriate medical investigations and be able to interpret them
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/](https://meded.ucsd.edu/ifp/jwest/resp_phys/)

Kasper D, Facui A, Hauser S, Longo D, Jameson JL, Loscalzo J. Harrison's principles of internal medicine (19<sup>th</sup> 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).

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,

Histology laboratory experience with virtual microscopy slides and access to the histology study room

### STUDENT ASSESSMENT

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

*Assignment 1* Histology Assignment

Value: 5% of Final Grade

Due Date: February 12, 2019

Description: Take home quiz downloaded and submitted through BBLearn.

*Assignment 2: Quiz I*

Quiz Value: 10% of Final Grade

Posting Date: February 5, 2019

Due Date: February 7, 2019

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

*Assignment 3: Quiz II*

Quiz Value: 10% of Final Grade

Posting Date: February 25, 2019

Due Date: February 27, 2019

Description: On-line quiz covering all material on adult respirology from February 5 to February 26.

*Assignment 3: Palliative Care Assignment*

Value: 5% of Final Grade

Due Date: February 13, 2019

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

*Mid-module Exam*

Value: 25% of Final Grade

Date: February 12, 2019

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 8.

*End of Module Exam*

Value: 45% of Final Grade

Date: March 4, 2019

Description: Comprehensive in-class. 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 28.

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

## **COURSE EVALUATIONS FOR QUALITY IMPROVEMENT**

As a result of feedback from previous student evaluations of this module, the following changes have been made:

1. An additional quiz has been added to promote student learning and provide the opportunity for students to identify additional learning needs prior to the final exam.
2. Two pre-exam open discussions have been scheduled for February 8 and February 28 from 4:30-5:30 pm. Location TBA.
3. Students are strongly encouraged to access the online learning material related to Arterial Blood Gases (ABGs) and Chest X-Rays (CXR) to supplement classroom sessions.

## 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. Colin Pearce

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

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

Office Location: RUH

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: A Collaboration Project of Medical Students and Faculty. (2015), Lilly L. \*

The Cardiology Rotation: Basic Reading and Board Review. (2014), Taylor G.

Clinical Cardiology Made Ridiculously Simple. (2014), Chizner, M.

Essentials of Bedside Cardiology: A Complete Course in Heart Sounds and Murmurs. (2012), Constant, J.\*

Harrison's Principles of Internal Medicine, 19<sup>th</sup> Edition. (2015), Kasper, D. \*

Understanding Electrocardiography. (2003), Boudreau Conover, M.\*

Pocket Guide to Electrocardiography. (1998), Boudreau Conover, M. \*

The Only EKG Book You'll Ever Need. (2015), Thaler, M. \*

Rapid Interpretation of EKG's, 6<sup>th</sup> Edition. (2000), Dubin, D. \*

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](http://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](http://www.teachingmedicine.com)

Further course/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

<b>Assessments</b>	<b>30%</b>
Patient Voice Assignment	3%
ECG On-Line Module Assignment	9%
Number Needed to Treat Assignment	3%
Introduction to CV Quiz	10%
ECG Quiz	5%
<b>Exams</b>	<b>70%</b>
Mid-Module	25%
End of Module	45%



*Assignment 1: Number Needed to Treat Assignment\**

Value: 3% of Final Grade

Due Date: March 16, 2019

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.

*Assignment 2: Patient Voice Assignment \**

Value: 3% of Final Grade

Due Date: March 29, 2019

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.

*Assignment 3: ECG On-Line Module Participation*

Value: 9% of Final Grade

Due Date: March 25, 2019

Description: On-line module participation to build understanding of ECGs and improve comfort with interpreting ECGs. Available at: [teachingmedicine.com](http://teachingmedicine.com).

*Quiz 1: Introduction to CV*

Value: 10% of Final Grade

Date: March 11, 2019

Description: Take-home, open-book quiz on basic sciences and principles of cardiovascular disease. On materials from March 4 up to and including March 8.

*Quiz 2: ECG Blackboard Quiz*

Value: 5% of Final Grade

Date: March 22, 2019

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

### *Mid-Module Exam*

Value: 25% of Final Grade

Date: March 15, 2019

Description: Invigilated, closed-book exam. 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 14. (Excluding Physiology and Pharmacology of Dysrhythmia March 14).

### *End of Module Exam*

Value: 45% of Final Grade

Date: April 1, 2019

Description: Comprehensive, invigilated, closed-book exam 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 March 28.

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**

As a result of feedback from previous student evaluations of this module, the following changes have been made.

1. Increased marks for highly reviewed teachingmedicine.com participation and quiz.
2. Removal of histology assignment while retaining histology content on “Introduction to CV” quiz.
3. Reviewed objectives and made revisions to improve clarity.
4. Patient Voice session moved later in module to allow better understanding of CV disorders.
5. Continued communication with students to set expectations (of both learners and instructors) as well as to address concerns as they arise.

## MODULE 4

### Hematology

#### MODULE DIRECTOR

Dr. Kelsey Brose

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Office Location: RUH 2609

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#### 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 laboratory 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 lecture can refer to one of the supplemental textbooks listed below.

#### Supplemental Resources:

Hematology in Clinical Practice (McGraw-Hill Medical, 5<sup>th</sup> edition)

Essential Hematology (Wiley-Blackwell, 7<sup>th</sup> 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

**Quizzes** **60%**

Quizzes 3 x 20%

**Exams** **40%**

End of Module 40%

*Quiz 1:* Anemia

Value: 20 % of Final Grade

Date: April 9, 2019

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.

*Quiz 2:* Hemostasis, Thrombosis and Transfusion Medicine

Value: 20 % of Final Grade

Date: April 16, 2019

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.

*Quiz 3:* Malignant Hematology

Value: 20 % of Final Grade

Date: April 24, 2019

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: 40% of Final Grade

Date: April 29, 2019

Description: ExamSoft, comprehensive, invigilated, closed-book exam. A comprehensive test 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**

As a result of feedback from previous student evaluations of this module, the following changes have been made:

1. Improved timing of final exam to allow for adequate preparation.
2. Reduction in number of small group cases.

## **IMPORTANT AND RELEVANT STUDENT INFORMATION**

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

**UGME CONTACT INFORMATION**

**EMAIL COMMUNICATIONS ETHICS**

**AND PROFESSIONALISM PROGRAM**

**EVALUATION**

**GUIDELINES FOR PROVIDING FEEDBACK**

**EMERGENCY PROCEDURES**

**MD PROGRAM ATTENDANCE POLICY ASSESSMENT**

**POLICY**

**PROMOTION STANDARDS**

**CONFLICT OF INTEREST**

**NON-INVOLVEMENT OF HEALTH CARE PROVIDERS IN STUDENT ASSESSMENT**

**APPEALS PROCEDURES**

**STUDENT DISCRIMINATION, HARRASSMENT, AND MISTREATMENT PROCEDURE**

**ACCOMMODATION OF STUDENTS WITH DISABILITIES**

**OFFICE OF STUDENT AFFAIRS**

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

## **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<sup>1</sup>.

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.

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<sup>1</sup> 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.

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.

### EXAM REVIEW PROCESS

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

### CITATION FORMAT

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

### RECORDING OF THE LECTURES

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

### COPYRIGHT

Course materials are provided to 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)**

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](http://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](http://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](http://www.usask.ca/secretariat/student-conduct-appeals/forms/IntegrityDefined.pdf)

### **EXAMINATIONS WITH ACCESS AND EQUITY SERVICES (AES)**

Students who have disabilities (learning, medical, physical, or mental health) are strongly encouraged to register with Access and Equity Services (AES) if they have not already done so. Students who suspect they may have disabilities should contact the Student Affairs Coordinator at the Office of Student Affairs (OSA) for advice and referrals. In order to access AES programs and supports, students must follow AES policy and procedures. For more information, check [www.students.usask.ca/aes](http://www.students.usask.ca/aes), or contact AES at (306) 966-7273 or [aes@usask.ca](mailto: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, Edith Conacher at [edith.conacher@usask.ca](mailto:edith.conacher@usask.ca) or (306) 966-4751.

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



## **STUDENT LEARNING SERVICES**

Student Learning Services (SLS) offers assistance to U of S undergrad and graduate students. For information on specific services, please see the SLS web site <http://library.usask.ca/studentlearning/>.

## **STUDENT AND ENROLMENT SERVICES DIVISION**

The Student and Enrolment Services Division (SESD) focuses on providing developmental and support services and programs to students and the university community. For more information, see the students' website <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.

*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.*