



UNIVERSITY OF CALGARY
CUMMING SCHOOL OF MEDICINE

UNDERGRADUATE MEDICAL EDUCATION (UME)
Medical Doctor Program (MD)

COURSE OUTLINE

Course Number:	MDCN 504.01
Course Name:	Internal Medicine Clerkship
Dates:	Feb 6, 2023 – April 21, 2024 (Class of 2024) Jan 15, 2024 – April 27, 2025 (Class of 2025)
Schedules and classroom locations:	Rotation schedule & location information will be emailed and posted to Osler.

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Course Description
Please refer to the University Calendar: http://www.ucalgary.ca/pubs/calendar/current/medicine.html#8554

Prerequisites
Please refer to the University Calendar: http://www.ucalgary.ca/pubs/calendar/current/medicine.html#8554

Supplementary Fees/Costs
<ul style="list-style-type: none">• Lab Coat• Stethoscope

Learning Objectives

Overall Objective

By the end of the internal medicine clerkship rotation, clinical clerks will be able to demonstrate the knowledge, skills, and attitudes required to confidently proceed in training as a junior resident on any medical service.

Performance will be assessed by clerks' active participation in the formal teaching activities and the formative midterm MCQ examination, as well as successful completion of the summative MCQ examination, completed logbook and the in-training performance evaluation (ITER) reports.

Enabling Knowledge Objectives

Essential Diagnoses/Syndromes

Diseases and syndromes within each of the relevant Internal Medicine Clinical Presentations have been divided into 'essential' and 'less important' entities.

At the end of the eight-week clerkship, it is expected that the clerk will be able to diagnose these 'essential' diseases and syndromes, and to a lesser extent treat them, as demonstrated by successful completion of the summative written examination and the in-training performance evaluation reports.

Conditions deemed 'essential' (as summarized in Table 1) have been categorized in this manner for a number of possible reasons, including:

- Common
- Acute presentations needing acute management
- Potential grave complications of missing diagnosis
- Important part of differential diagnosis for a given clinical presentation

For these reasons, 'essential' causes will make up most of the examination diagnoses. However, the final diagnosis on an examination question may be a 'secondary' cause, but the 'essential' cause(s) will feature highly in the differential diagnosis.

'Secondary' causes may be common diseases (ex: vasovagal syncope, chest wall pain) that may in fact be the final diagnosis on an examination question, but are listed as 'secondary' for reasons such as:

- Benign disease
- No specific treatment
- Diagnosis of exclusion (excluding the 'essential' causes)
- No specific diagnostic test for condition

Where a syndrome is listed (ex: hemolysis), the diagnosis of the syndrome is considered essential, and unless stated otherwise, the specific causes (ex: sickle cell) are less important.

Drug classes and their side-effects have been listed separately in section D, Table 2.

The numbers assigned to each clinical presentation correspond to their numbers in the main University of Calgary Medical School Clinical Presentation list.

GENERAL

03. FEVER AND CHILLS

- **ESSENTIAL**
 - INFECTIOUS CAUSES: MENINGITIS, ENCEPHALITIS, PNEUMONIA (ATYPICAL AND TYPICAL COMMUNITY-ACQUIRED +/- EMPYEMA), MYCOBACTERIUM TUBERCULOSIS, HIV, ENDOCARDITIS, UTI/PYELO, SEPTIC JOINT

- NEOPLASTIC CAUSES: LYMPHOMAS, LEUKEMIAS, CARCINOMAS (LUNG)
- COLLAGEN VASCULAR DISEASES: SLE, RA
- OTHER: SARCOIDOSIS, INFLAMMATORY BOWEL
- **SECONDARY**
 - INFECTIOUS CAUSES: ASPIRATION AND NOSOCOMIAL PNEUMONIAS, LUNG ABSCESS, BONE, GASTROINTESTINAL, SKIN INFECTIONS
 - RHEUMATIC FEVER, SEXUALLY TRANSMITTED DISEASES
 - OTHER CARCINOMAS

RETICULOENDOTHELIAL

06. ANEMIA/PALLOR/FATIGUE

- **ESSENTIAL**
 - MICROCYTIC CAUSES: IRON DEFICIENCY, ANEMIA OF CHRONIC DISEASE
 - NORMOCYTIC CAUSES: ACUTE BLOOD LOSS (SEE 96,97), BONE MARROW FAILURE, MULTIPLE MYELOMA, HEMOLYSIS (INCLUDING TRANSFUSION REACTIONS), CHRONIC RENAL FAILURE (SEE 44)
 - MACROCYTIC CAUSES: B12 DEFICIENCY
- **SECONDARY**
 - THALASSEMIAS
 - FOLATE DEFICIENCIES

07. BLEEDING TENDENCY/BRUISING

- **ESSENTIAL**
 - PLATELET CAUSES: THROMBOCYTOPENIA
 - DECREASED PRODUCTION (SEE ALSO 'ANEMIA', BONE MARROW CAUSES)
 - SEQUESTRATION (SEE ALSO 'SPLENOMEGALY')
 - DESTRUCTION: DIC, ITP, SLE, TTP/HUS
 - COAGULATION CAUSES: LIVER DISEASE-RELATED, DIC
 - VASCULAR CAUSES: VASCULITIS
- **SECONDARY**
 - PLATELET CAUSES: VON WILLEBRAND'S
 - COAGULATIN CAUSES: HEMOPHILIA, VITAMIN K DEFICIENCY

08. ELEVATED HEMATOCRIT/POLYCYTHEMIA

- **SECONDARY**
 - POLYCYTHEMIA RUBRA VERA (PRV)
 - SECONDARY CAUSES: HYPOXIA, ERYTHROPOEITIN-SECRETING TUMOUR

09. PAINFUL LIMB

09A PAINFUL SWOLLEN LIMB

- **ESSENTIAL**
 - EDEMA (SEE 35 BELOW), DEEP VEIN THROMBOSIS (SEE 09B BELOW)
- **SECONDARY**
 - INFECTIONS (BONE, SOFT TISSUE, JOINT)

09B VENOUS THROMBOSIS/HYPERCOAGULABLE STATES

- **ESSENTIAL**
 - DVT TRIAD: TRAUMA, STASIS, HYPERCOAGULABILITY
 - CAUSES OF HYPERCOAGULABILITY: MALIGNANCY, NEPHROTIC SYNDROME, INFLAMMATORY BOWEL DISEASE
- **SECONDARY**
 - OTHER CAUSES OF HYPERCOAGULABILITY: PROTEIN C,S, ANTI-THROMBIN III DEFICIENCY, APC RESISTANCE

- 09C INTERMITTENT CLAUDICATION
- SECONDARY
 - PERIPHERAL VASCULAR DISEASE

10. ABNORMALITIES OF WHITE CELLS

- **ESSENTIAL**
 - NEOPLASTIC CAUSES OF LYMPHOCYTOSIS: ALL, AML
- **SECONDARY**
 - NEOPLASTIC: CLL, CML
 - CAUSES OF REACTIVE LYMPHOCYTOSIS (VIRAL, BACTERIAL INFECTIONS)
 - ALL CAUSES OF: NEUTROPENIA, NEUTOPHILIA

11. LYMPHADENOPATHY: GENERALIZED

- **ESSENTIAL**
 - DIFFUSE LYMPHADENOPATHY, NEOPLASTIC CAUSES: LYMPHOMA (HODGKIN'S, NHL)
 - DIFFUSE LYMPHADENOPATHY, REACTIVE CAUSES: INFECTIONS (HIV), INFLAMMATORY (SLE, RA, SARCOIDOSIS)
- **SECONDARY**
 - CAUSES OF LOCALIZED LYMPHADENOPATHY

12. SPLENOMEGALY

- **ESSENTIAL**
 - CAUSES: LIVER DISEASES, INFECTIONS (HIV), NEOPLASTIC (LYMPHOMAS/LEUKEMIAS), HEMOLYSIS, INFLAMMATORY (SLE, RA, SARCOIDOSIS)

13. FEVER IN THE IMMUNOCOMPROMISED HOST

- **ESSENTIAL**
 - SAME AS FOR 'FEVER' (003)
- **SECONDARY**
 - FEBRILE NEUTROPENIA

MUSCULOSKELETAL AND SKIN

18. JOINT PAIN, MONO-ARTICULAR (ACUTE, CHRONIC)

- **ESSENTIAL**
 - OSTEOARTHRITIS
 - SEPTIC JOINT
 - CRYSTAL-INDUCED: GOUT/PSEUDOGOUT
 - SYSTEMIC DISEASE, MONOARTICULAR PRESENTATION: SLE, RA
 - INFLAMMATORY AXIAL CAUSE: REITER'S SYNDROME
- **SECONDARY**
 - TRAUMA
 - INFLAMMATORY AXIAL CAUSES: ANKYLOSING SPONDYLITIS, PSORIATIC ARTHRITIS, INFLAMMATORY BOWEL ASSOCIATED

19. JOINT PAIN, POLYARTICULAR (ACUTE, CHRONIC)

- **ESSENTIAL**
 - INFLAMMATORY, SYMMETRIC CAUSES: RHEUMATOID ARTHRITIS, SLE
 - INFLAMMATORY, ASYMETRIC CAUSE: REITER'S SYNDROME
 - NON-INFLAMMATORY CAUSE: OSTEOARTHRITIS
- **SECONDARY**
 - OTHER CAUSES: VIRAL ARTHRITIS, PSORIATIC ARTHRITIS, RHEUMATIC FEVER

20. REGIONAL PAIN, NON-ARTICULAR (HAND, WRIST, ELBOW, SHOULDER, SPINE, HIPS, KNEE, FOOT)

- **ESSENTIAL**
 - NERVE ROOT DISTRIBUTIONS (SENSORY, MOTOR, REFLEXES)
 - POLYMYALGIA RHEUMATICA/GIANT-CELL ARTERITIS
- **SECONDARY**
 - FIBROMYALGIA

CARDIOVASCULAR SYSTEM

23. CHEST DISCOMFORT

- **ESSENTIAL**
 - CARDIOVASCULAR CAUSES: ANGINA/MYOCARDIAL INFARCTION, AORTIC DISSECTION, PERICARDITIS (AND ITS CAUSES)
 - RESPIRATORY CAUSES: PLEURAL DISEASE (SEE 29C), PNEUMONIA (SEE 03), PNEUMOTHORAX, PULMONARY EMBOLUS
- **SECONDARY**
 - OTHER CAUSES: CHEST WALL, SKIN DISEASES, GASTROINTESTINAL DISEASES, PSYCHOGENIC

24. LOSS OF CONSCIOUSNESS/SYNCOPE/PRESYNCOPE

- **ESSENTIAL**
 - SEIZURES (SEE 70)
 - CEREBROVASCULAR CAUSES: STROKE (TIA)
 - CARDIOVASCULAR CAUSES:
 - MECHANICAL: AORTIC STENOSIS
 - ELECTRICAL:
 - BRADYARRHYTHMIAS: HEART BLOCKS
 - TACHYARRHYTHMIAS: ATRIAL FIBRILLATION, VENTRICULAR TACHYCARDIA
 - METABOLIC CAUSES: HYPOXIA (SEE 29), HYPOGLYCEMIA
- **SECONDARY**
 - REFLEX/UNDERFILL CAUSES: VASOVAGAL, ORTHOSTATIC
 - PSYCHOGENIC

25. PALPITATIONS (ABNORMAL ECG)

- **ESSENTIAL**
 - CAUSES: ATRIAL FIBRILLATION, VENTRICULAR TACHYCARDIA
- **SECONDARY**
 - CAUSES: SUPRAVENTRICULAR TACHYCARDIA, WOLFF-PARKINSON-WHITE

26. SHOCK (HYPOTENSION)

- **ESSENTIAL**
 - CARDIOGENIC CAUSES: MYOCARDIAL INFARCTION, ENDOCARDITIS, AORTIC DISSECTION
 - HYPOVOLEMIC CAUSES: ACUTE BLOOD LOSS (SEE 96,97), PANCREATITIS
 - DISTRIBUTIVE: SEPSIS (SEE 03)
 - OBSTRUCTIVE: TENSION PNEUMOTHORAX, PULMONARY EMBOLUS, PERICARDIAL TAMPONADE

27. CARDIAC ARREST/CARDIOVASCULAR COLLAPSE

- **ESSENTIAL**
 - CAUSES LISTED AS 'ESSENTIAL' IN OTHER CLINICAL PRESENTATIONS

28. MURMUR

- 28A SYSTOLIC MURMUR
- **ESSENTIAL**
 - AORTIC STENOSIS, MITRAL REGURGITATION
 - **SECONDARY**

- TRICUSPID REGURGITATION, PULMONARY STENOSIS, VSD
- 28B DIASTOLIC MURMUR
- **ESSENTIAL**
- MITRAL STENOSIS, AORTIC REGURGITATION
- **SECONDARY**
- TRICUSPID STENOSIS, PULMONARY REGURGITATION

RESPIRATORY SYSTEM

29. COUGH AND DYSPNEA

- **ESSENTIAL**
- CARDIAC CAUSES: UNSTABLE ANGINA, CONGESTIVE HEART FAILURE (PULMONARY EDEMA), PERICARDIAL TAMPONADE
- RESPIRATORY CAUSES: ASTHMA, COPD, PULMONARY EMBOLUS, PNEUMONIA (SEE 03), PNEUMOTHORAX, PLEURAL DISEASE (SEE 29C), LUNG CANCER, INTERSTITIAL LUNG DISEASES (ESP. SARCOIDOSIS, RA)
- OTHER: ANEMIA (SEE 06), HYPERTHYROIDISM (SEE 48A), METABOLIC ACIDOSIS (SEE 31A)
- **SECONDARY**
- PULMONARY HYPERTENSION, CHEST WALL/MUSCULAR, UPPER AIRWAY, CNS, FOREIGN BODY, PSYCHOGENIC

29A COUGH AND/OR DYSPNEA WITH NORMAL CHEST X-RAY

- **ESSENTIAL**
- CARDIAC CAUSES: TAMPONADE (NORMAL LUNGS ON X-RAY), UNSTABLE ANGINA
- RESPIRATORY CAUSES: PULMONARY EMBOLUS, ASTHMA, COPD,
- OTHER: ANEMIA (SEE 06), HYPERTHYROIDISM (SEE 48A), METABOLIC ACIDOSIS (SEE 31A)
- **SECONDARY**
- PULMONARY HYPERTENSION, CHEST WALL/MUSCULAR, UPPER AIRWAY, CNS, FOREIGN BODY, PSYCHOGENIC

29B COUGH AND/OR DYSPNEA WITH DIFFUSE CHEST X-RAY ABNORMALITY

- **ESSENTIAL**
- CAUSES: PULMONARY EDEMA, ATYPICAL PNEUMONIA, TUBERCULOSIS, INTERSTITIAL LUNG DISEASES (ESP. SARCOIDOSIS, RA)
- **SECONDARY**
- OTHER CAUSES OF INTERSTITIAL LUNG DISEASES: PNEUMOCONIOSIS, IDIOPATHIC PULMONARY FIBROSIS, SCLERODERMA, WEGENER'S, GOODPASTURE'S, LYMPHANGITIC CARCINOMATOSIS, RADIATION INJURY, METHOTREXATE LUNG

29C COUGH AND/OR DYSPNEA WITH PLEURAL ABNORMALITY

- **ESSENTIAL**
- PNEUMOTHORAX
- PLEURAL EFFUSION
 - TRANSUDATIVE: CHF, CIRROSIS, NEPHROTIC SYNDROME
 - EXUDATIVE: PULMONARY EMBOLUS, MALIGNANCY (LUNG), PNEUMONIA/EMPYEMA (SEE 03), RA, SLE, PANCREATITIS
- **SECONDARY**
- MESOTHELIOMA
- OTHER METASTATIC MALIGNANCIES (BREAST, OVARIAN)
- CHYLOTHORAX

29D COUGH AND/OR DYSPNEA WITH LOCAL CHEST X-RAY ABNORMALITY

- **ESSENTIAL**
- PRIMARY LUNG CANCER, TUBERCULOSIS, RA
- **SECONDARY**
- OTHER INFECTIONS (HISTOPLASMOMA), PULMONARY INFARCT, WEGENER'S, VASCULAR MALFORMATIONS

- PLEURAL/MEDIASTINAL MASSES
- 29E COUGH, DYSPNEA AND FEVER
- **ESSENTIAL**
- PNEUMONIA (SEE 03), EXACERBATION OF COPD, PULMONARY EMBOLUS
- **SECONDARY**
- LUNG ABSCESS

30. HYPOXIA, HYPOXEMIA, CYANOSIS

- **ESSENTIAL**
- ALL CAUSES PREVIOUSLY LISTED AS ESSENTIAL UNDER COUGH/DYSPNEA (SEE 29)
- **SECONDARY**
- ALL CAUSES PREVIOUSLY LISTED AS ESSENTIAL UNDER COUGH/DYSPNEA (SEE 29)

31. ABNORMAL SERUM HYDROGEN ION CONCENTRATION

- **ESSENTIAL**
- 31 A: METABOLIC ACIDOSIS
 - HIGH ANION GAP CAUSES
 - ENDOGENOUS: DIABETIC KETOACIDOSIS, RENAL FAILURE (SEE 34)
 - EXOGENOUS: SALICYLATE OVERDOSE
- **SECONDARY**
- 31A METABOLIC ACIDOSIS
 - HIGH ANION GAP CAUSES:
 - ENDOGENOUS: LACTIC ACIDOSIS, STARVATION KETOACIDOSIS
 - EXOGENOUS: METHANOL, ETHYLENE GLYCOL OVERDOSE
 - NORMAL ANION GAP CAUSES: DIARRHEA, RTA
- 31B METABOLIC ALKALOSIS
 - CHLORIDE RESPONSIVE CAUSES: VOMITING, DIURETICS
 - CHLORIDE UNRESPONSIVE CAUSES: CONN'S, CUSHING'S, BARTTER'S
- 31C/D RESPIRATORY ACIDOSIS/ALKALOSIS

32. HEMOPTYSIS

- **ESSENTIAL**
- CAUSES PREVIOUSLY CONSIDERED ESSENTIAL CAUSES OF COUGH AND DYSPNEA (TUMOUR, INFECTION, COPD, SLE, PULMONARY EDEMA, PULMONARY EMBOLUS)
- **SECONDARY**
- CAUSES PREVIOUSLY CONSIDERED LESS IMPORTANT CAUSES OF COUGH/DYSPNEA (BENIGN TUMOURS, VASCULAR MALFORMATIONS, WEGENER'S, GOODPASTURE'S)

RENAL - ELECTROLYTES SYSTEM

34. RENAL FAILURE, ACUTE

- **ESSENTIAL**
- PRE-RENAL CAUSES: CAUSES OF SHOCK (SEE 26)
- RENAL CAUSES:
 - GLOMERULAR: SLE, TTP/HUS
 - ACUTE TUBULAR NECROSIS (ISCHEMIC AND TOXIC)
 - INTERSTITIAL:
 - ACUTE INTERSTITIAL NEPHRITIS: BROAD CATEGORIES ONLY (DRUGS, INFECTION)
 - RHABDOMYOLYSIS
 - CAST NEPHROPATHY: GOUT (URIC ACID), MULTIPLE MYELOMA
- **SECONDARY**
- POST RENAL CAUSES
- THE SPECIFIC CAUSES OF ACUTE INTERSTITIAL NEPHRITIS
- OTHER CAUSES OF ACUTE GLOMERULONEPHRITIS: HENOCHE-SCHONLEIN PURPURA,

36. GENERALIZED EDEMA

- **ESSENTIAL**
 - RENAL FAILURE [34], CIRRHOSIS, NEPHROTIC SYNDROME, CONGESTIVE HEART FAILURE, HYPOTHYROID [48B]
- **SECONDARY**
 - HYPOALBUMINEMIA (AND ITS SPECIFIC CAUSES)
 - ANGIOEDEMA, DRUGS, VENOUS/LYMPHATIC DRAINAGE, INCREASED CAPILLARY PERMEABILITY (ANT ITS SPECIFIC CAUSES)

37. ABNORMAL SERUM SODIUM CONCENTRATION

37A HYPONATREMIA

- **ESSENTIAL**
 - HYPOVOLEMIC (DIURETICS)
 - EUVOLEMIC: SIADH (AND ITS BROAD CATEGORIES OF CAUSES)
 - EDEMA STATES (SEE 36)
- **SECONDARY**
 - ARTIFACTUAL, PRIMARY POLYDIPSIA

37B HYPERNATREMIA

- **SECONDARY**
 - DIABETES INSIPIDUS, HYPERALDOSTERONISM

38. POLYURIA

- **ESSENTIAL**
 - DIABETES MELLITUS (SEE 53)
- **SECONDARY**
 - DIABETES INSIPIDUS, PRIMARY POLYDIPSIA

39. HYPERTENSION

- **ESSENTIAL**
 - CAUSES:
 - PRIMARY HYPERTENSION (INCLUDING HYPERTENSIVE CRISIS)
 - SECONDARY CAUSES: RENAL PARENCHYMAL DISEASE (SEE 34, 44), ALCOHOL (SEE 76)
- **SECONDARY**
 - RENAL: TRANSPLANT, RENAL ARTERY STENOSIS
 - CONN'S SYNDROME, PHEOCHROMOCYTOMA, THYROID DISEASE
 - COARCTATION OF THE AORTA

40. ABNORMAL SERUM POTASSIUM CONCENTRATION/WEAKNESS/FATIGUE

40A HYPOKALEMIA

- **ESSENTIAL**
 - BROAD CATEGORIES OF CAUSES: INTAKE, REDISTRIBUTION, LOSS (RENAL AND GI)
- **SECONDARY**
 - THE SPECIFIC CAUSES (UNLESS CONSIDERED ESSENTIAL ELSEWHERE)

40B HYPERKALEMIA (FATIGUE, HYPERPIGMENTATION)

- **ESSENTIAL**
 - LEUKEMIAS AS CAUSE OF PSEUDOHYPERKALEMIA
 - REDISTRIBUTION CAUSES: DKA/INSULIN DEFICIENCY, HEMOLYSIS, RHABDOMYOLYSIS, NON-ANION GAP ACIDOSIS (SEE 31A)
 - DECREASE EXCRETION CAUSES: RENAL FAILURE (SEE 34,44), ADDISON'S DISEASE
- **SECONDARY**
 - INTAKE INCREASE

- REDISTRIBUTION CAUSES: TRAUMA/CRUSH, TUMOUR LYSIS
- DECREASED EXCRETION CAUSES: HYPORENINEMIC-HYPOALDOSTERONISM

41. DYSURIA

- **ESSENTIAL**
 - URINARY TRACT INFECTION (CYSTITIS, PYELONEPHRITIS)
- **SECONDARY**
 - PROSTATITIS, URETHRITIS (STD), IRRITABLE BLADDER

42. HEMATURIA

- **ESSENTIAL**
 - DIFFERENTIATING EXTRAGLOMERULAR FROM GLOMERULAR HEMATURIA

42A HEMATURIA, EXTRARENAL

- **ESSENTIAL**
 - CYSTITIS
- **SECONDARY**
 - NEPHROLITHIASIS, TRAUMA, BLADDER CANCER, PROSTATITIS, URETHRITIS

42B HEMATURIA, INTRARENAL, EXTRAGLOMERULAR

- **ESSENTIAL**
 - PYELONEPHRITIS
 - VASCULAR
 - HYPERTENSIVE NEPHROSCLEROSIS
 - TUBULOINTERSTITIAL
 - SLE, SARCOIDOSIS, MULTIPLE MYELOMA, URATE NEPHROPATHY
- **SECONDARY**
 - RENAL TUMOURS/CYSTS
 - TUBULOINTERSTITIAL
 - SJOGREN'S, SCLERODERMA, OTHER VASCULAR (DM/PAPILLARY NECROSIS, SICKLE CELL)

42B HEMATURIA, GLOMERULAR

- **ESSENTIAL**
 - SYSTEMIC (OTHER ORGAN INVOLVEMENT) CAUSES: SLE, HUS/TTP, MALIGNANT HYPERTENSION
 - POSTINFECTION: ENDOCARDITIS
- **SECONDARY**
 - NONSYSTEMIC CAUSES (ISOLATED): IGA NEPHROPATHY
 - SYSTEMIC CAUSES: WEGENER'S, GOODPASTURE'S, HENoch-SCHONLEIN PURPURA, POLYARTERITIS NODOSA
 - POSTINFECTION: POST-STREP

43. PROTEINURIA

- **ESSENTIAL**
 - OVERFLOW PROTEINURIA
 - MULTIPLE MYELOMA
 - TUBULOINTERSTITIAL
 - SLE, SARCOIDOSIS, URATE NEPHROPATHY, MULTIPLE MYELOMA
 - GLOMERULAR/NEPHROTIC SYNDROME
 - SLE, DIABETES MELLITUS, MALIGNANT HYPERTENSION
- **SECONDARY**
 - TUBULOINTERSTITIAL CAUSES
 - SJOGREN'S, SCLERODERMA, VASCULAR (DM/PAPILLARY NECROSIS, SICKLE CELL)
 - GLOMERULAR CAUSES
 - PRIMARY GLOMERULAR DISEASE (MINIMAL CHANGE, FOCAL SCLEROSIS, MEMBRANOUS GN)
 - AMYLOIDOSIS

44. RENAL FAILURE, CHRONIC

- **ESSENTIAL**
 - SECONDARY GLOMERULAR CAUSES: HYPERTENSION, DIABETES, SLE
 - TUBULOINTERSTITIAL CAUSES (LISTED AS ESSENTIAL IN 43)
- **SECONDARY**
 - PRE-RENAL CAUSES: RENAL ARTERY STENOSIS, EMBOLI
 - PRIMARY GLOMERULAR DISEASE (SEE 43)
 - POLYCYSTIC KIDNEY DISEASE
 - TUBULOINTERSTITIAL CAUSES (SEE 43)
 - POST-RENAL CAUSES

ENDOCRINE-METABOLIC

46. ADRENAL MASS

- **SECONDARY**
 - CUSHING'S, PHEOCHROMOCYTOMA, CONN'S

48. NECK MASS

- **SECONDARY**
 - PAINFUL CAUSES: THYROIDITIS, INFECTION, TRAUMA
 - PAINLESS CAUSES: CANCER, CYSTS, ADENOMA

48A HYPERTHYROIDISM

- **ESSENTIAL**
 - GRAVE'S DISEASE
- **SECONDARY**
 - PITUITARY TUMOUR
 - THYROIDITIS, MULTINODULAR GOITRE, TOXIC ADENOMA

48B HYPOTHYROIDISM

- **ESSENTIAL**
 - HASHIMOTO'S
- **SECONDARY**
 - THYROIDITIS (POSTPARTUM, SUBACUTE)
 - PITUITARY FAILURE

49. ABNORMALITIES OF BLOOD CHOLESTEROL/LIPIDS

- **ESSENTIAL**
 - SECONDARY CAUSES OF:
 - HYPERCHOLESTEROLEMIA (LDL): NEPHROTIC SYNDROME, HYPOTHYROIDISM, CHOLESTATIC LIVER DISEASES (ESP. PRIMARY BILIARY CIRROSIS)
 - HYPERTRYGLYCERIDEMIA: ALCOHOL (SEE 76), DIABETES (SEE 53)
- **SECONDARY**
 - PRIMARY CAUSES OF ABNORMAL LIPIDS
 - OTHER LIFESTYLE (DIET, SEDENTARY, SMOKING) CAUSES OF ABNORMAL LIPIDS

53. HYPERGLYCAEMIA, DIABETES (HYPOGLYCEMIA)

- **ESSENTIAL**
 - PRIMARY CAUSES: IDDM, NIDDM (INCLUDING ALL COMPLICATIONS, DKA)
 - SECONDARY CAUSES: HEMOCHROMATOSIS
 - IATROGENIC HYPOGLYCEMIA
- **SECONDARY**
 - SECONDARY CAUSES: PREGNANCY, ACROMEGALY, CUSHING'S, PHEOCHROMOCYTOMA, PANCREATIC INSUFFICIENCY (CHRONIC PANCREATITIS, CF)
 - HYPOGLYCEMIA: POSTPRANDIAL, EXERCISE, INSULINOMA

54. ABNORMAL SERUM CALCIUM CONCENTRATION

54A HYPERCALCEMIA

- **ESSENTIAL**
 - HYPERPARATHYROIDISM, LUNG CARCINOMA (SQUAMOUS CELL), MULTIPLE MYELOMA, SARCOIDOSIS
- **SECONDARY**
 - MILK-ALKALI SYNDROME, OSTEOLYTIC METASTASES, IMMOBILIZATION, PAGET'S, VITAMIN D RELATED

54B HYPOCALCEMIA

- **ESSENTIAL**
 - HYPOPARATHYROIDISM, PANCREATITIS, RENAL FAILURE
- **SECONDARY**
 - OSTEOLYTIC METASTASES, CALCITONIN EXCESS, LOW VITAMIN D/MALABSORPTION

NEUROSCIENCES - PART I

57. MUSCLE WEAKNESS (PARALYSIS, PARESIS)

- **ESSENTIAL**
 - CNS/BRAIN STEM CAUSES: CEREBROVASCULAR ACCIDENTS (HEMORRAGE, THROMBOTIC OR EMBOLIC INFARCTION)
 - SPINAL CORD CAUSES: B12 DEFICIENCY
 - PNS CAUSES: GUILLAIN-BARRE SYNDROME, DIABETIC (SEE 53)/ALCOHOLIC NEUROPATHY (SEE 76)
 - MYOPATHY: THYROID DISEASE (SEE 48), HYPERPARATHYROIDISM, ALCOHOL (SEE 76), POTASSIUM DISTURBANCES (SEE 40)
- **SECONDARY**
 - CNS BRAIN STEM CAUSES: TUMOURS, ABCESS
 - SPINAL CORD CAUSES: MULTIPLE SCLEROSIS, SPINAL CORD TUMOUR/ABCESS, ALS
 - PNS CAUSE: OTHER NEUROPATHIES
 - NEUROMUSCULAR JUNCTION: MYASTHENIA GRAVIS, EATON-LAMBERT SYNDROME
 - MYOPATHY: MUSCULAR DYSTROPHY, POLYMYOSITIS/DERMATOMYOSITIS, CUSHING'S

58. NUMBNESS AND TINGLING

- **ESSENTIAL**
 - UPPER AND LOWER EXTREMITY NERVE ROOT DISTRIBUTIONS
 - CNS/BRAIN STEM CAUSES: TRANSIENT ISCHEMIC ATTACKS
 - SPINAL CORD CAUSES: B12 DEFICIENCY
 - PNS CAUSES: GUILLAIN-BARRE SYNDROME, DIABETIC (SEE 53)/ALCOHOLIC NEUROPATHY (SEE 76)
- **SECONDARY**
 - SPINAL CORD COMPRESSION FROM METASTASES, TUMOUR, ABCESS, HEMATOMA, DISC HERNIATION
 - OTHER NEUROPATHIES

60. SPEECH AND LANGUAGE DISTURBANCES

60A HEMIPLEGIA/HEMISENSORY LOSS □ APHASIA

- **ESSENTIAL**
 - CEREBROVASCULAR ACCIDENT
- **SECONDARY**
 - CNS TUMOR/ABCESS

61. INVOLUNTARY MOVEMENTS

- **ESSENTIAL**

- PARKINSON'S DISEASE, ALCOHOL WITHDRAWAL (SEE 76), HYPERTHYROID (SEE 48)
- SECONDARY
 - CEREBELLAR DISORDERS, TICS AND CHOREA

62. GAIT DISTURBANCES (ATAXIA)

- ESSENTIAL
 - ALCOHOL INDUCED CEREBELLAR ATROPHY, PARKINSON'S DISEASE
- SECONDARY
 - OTHER CEREBELLAR DISORDERS, SPASTICITY POST-CEREBROVASCULAR ACCIDENT

NEUROSCIENCES - PART II

63. DIZZINESS AND VERTIGO

- ESSENTIAL
 - VERTEBROBASILAR (BRAINSTEM) OR CEREBELLAR CEREBROVASCULAR ACCIDENTS
- SECONDARY
 - MULTIPLE SCLEROSIS, INNER EAR DISEASES (MENIERE'S)

65. VISION LOSS

65B ACUTE VISION LOSS

- ESSENTIAL
 - TRANSIENT ISCHEMIC ATTACKS, TEMPORAL ARTERITIS

67. DIPLOPIA

67A DIPLOPIA

- ESSENTIAL
 - BRAIN STEM CEREBROVASCULAR ACCIDENT
- SECONDARY
 - BRAIN TUMOURS, MYASTHENIA GRAVIS

68. COMA (IMPAIRED CONSCIOUSNESS) AND ACUTE CONFUSION (DELIRIUM)

- ESSENTIAL
 - CAUSES 'OUT OF THE BRAIN'
 - SUBSTRATE DEFICIENCIES: HYPOXIA (SEE 30), THIAMINE (SEE 76), HYPOGLYCEMIA (SEE 53), ANEMIA (SEE 06)
 - MAJOR ORGAN FAILURE: RENAL FAILURE (SEE 34), CIRROSIS/ENCEPHALOPATHY, CHF
 - ELECTROLYTE ABNORMALITIES: SODIUM (SEE 37), CALCIUM (SEE 54), ACIDOSIS (SEE 31)
 - ALCOHOL INTOXICATION/WITHDRAWAL (SEE 76)
 - ENDOCRINE: HYPOTHYROID (SEE 48B), ADDISON'S
 - HYPERTENSIVE ENCEPHALOPATHY (SEE 39)
 - SEPSIS (SEE 03)
 - CAUSES 'IN THE BRAIN'
 - CEREBROVASCULAR ACCIDENTS, MENINGITIS/ENCEPHALITIS, SEIZURES/POST-ICTAL STATE (SEE 70)
- SECONDARY
 - CAUSES 'OUT OF THE BRAIN'
 - SUBSTRATE DEFICIENCY: HYPOPHOSPHATEMIA
 - ELECTROLYTE ABNORMALITIES: MAGNESIUM
 - ENDOCRINE: HYPOPITUITARISM, CUSHING'S
 - CAUSES 'IN THE BRAIN'
 - TRAUMA/SUBDURAL HEMATOMA

70. SEIZURES

70A SEIZURES IN ADULT/STATUS EPILEPTICUS

- **ESSENTIAL**
 - GENERALIZED SEIZURES
 - PRIMARY EPILEPSY
 - SECONDARY CAUSES
 - CNS: CEREBROVASCULAR ACCIDENTS, MENINGITIS/ENCEPHALITIS
 - METABOLIC: HYPO/HYPERNATREMIA (SEE 37), HYPOCALCEMIA (SEE 54B), HYPOGLYCEMIA (SEE 53)
 - ALCOHOL INTOXICATION AND WITHDRAWAL (SEE 76)
- **SECONDARY**
 - PARTIAL SEIZURES, ABSENCE SEIZURES, PSEUDOSEIZURES
 - GENERALIZED SEIZURES: HYPOMAGNESEMIA

72. DEMENTIA, MEMORY DISTURBANCES (OTHER COGNITIVE CHANGES)

- **ESSENTIAL**
 - IRREVERSIBLE CAUSES
 - ALZHEIMER'S, PARKINSON'S
 - REVERSIBLE CAUSES
 - HIV, ALCOHOL (THIAMINE), NORMAL PRESSURE HYDROCEPHALUS, HYPOTHYROIDISM (SEE 48B), SODIUM/CALCIUM DISTURBANCES (SEE 37,54), MAJOR ORGAN FAILURE
- **SECONDARY**
 - IRREVERSIBLE CAUSES
 - MULTI-INFARCT, CREUTZFELD-JACOB AND PICK'S DISEASE,
 - REVERSIBLE CAUSES
 - SYPHILIS, BRAIN TUMORS/ABCESS, SUBDURAL HEMATOMA, FOLATE/NIACIN DEFICIENCY, WILSON'S DISEASE

74. HEADACHES

- **ESSENTIAL**
 - CLINICAL SIGNS OF WORRISOME (BLEEDS, RAISED ICP) HEADACHE
 - INTRACRANIAL HEMORRAGE, TEMPORAL ARTERITIS
- **SECONDARY**
 - TENSION HEADACHES
 - MIGRAINE AND OTHER VASCULAR HEADACHES
 - BRAIN TUMOURS
 - REFERRED PAIN

76. SUBSTANCE ABUSE

- **ESSENTIAL**
 - ALCOHOLISM AND ITS MULTISYSTEM DETRIMENTAL EFFECTS

GASTROINTESTINAL

83. WEIGHT LOSS

- **ESSENTIAL**
 - DECREASED INTAKE CAUSES
 - PEPTIC ULCER DISEASE, INFLAMMATORY BOWEL DISEASE
 - INCREASED METABOLISM
 - HIV, HYPERTHYROIDISM (SEE 48A)
 - LOSS OF NUTRIENTS
 - DIABETES MELLITUS
- **SECONDARY**
 - OTHER CAUSES OF DECREASED INTAKE
 - MALABSORPTION

- HYPERMETABOLISM FROM UNDERLYING MALIGNANCY

94. DIFFICULTY SWALLOWING/DYSPHAGIA

- SECONDARY
 - REFLUX-INDUCED STRICTURE, ESOPHAGEAL CANCER, ACHALASIA, SCLERODERMA

95. ABDOMINAL PAIN

95A ACUTE ABDOMINAL PAIN

- **ESSENTIAL**
 - CARDIORESPIRATORY CAUSES: PULMONARY EMBOLUS, MI, PNEUMONIA
 - GASTROINTESTINAL CAUSES:
 - ACUTE PANCREATITIS, PEPTIC ULCER DISEASE, ACUTE HEPATITIS, PEPTIC ULCER DISEASE, INFLAMMATORY BOWEL DISEASE, IRRITABLE BOWEL SYNDROME
 - METABOLIC CAUSES: DKA
 - URINARY CAUSES: UTI/PYELO
- **SECONDARY**
 - GASTROINTESTINAL CAUSES: 'SURGICAL' CAUSES, ABDOMINAL MALIGNANCY
 - METABOLIC CAUSES: SICKLE CELL, HENOCHE-SCHONLEIN PURPURA
 - GENITOURINARY CAUSES: KIDNEY STONES ALL GYNE CAUSES

95B CHRONIC ABDOMINAL PAIN

- **ESSENTIAL**
 - CARDIORESPIRATORY CAUSES: ANGINA, RECURRENT PULMONARY EMBOLUS
 - GASTROINTESTINAL CAUSES: PEPTIC ULCER DISEASE, INFLAMMATORY BOWEL DISEASE, IRRITABLE BOWEL SYNDROME
- **SECONDARY**
 - GASTROINTESTINAL CAUSES: ESOPHAGITIS, ABDOMINAL MALIGNANCY, BILIARY COLIC, CHRONIC PANCREATITIS
 - ALL GENITOURINARY CAUSES

96. HEMATEMESIS

- **ESSENTIAL**
 - PEPTIC ULCER DISEASE, CIRROSIS WITH VARICES
- **SECONDARY**
 - ESOPHAGITIS, UPPER GI CANCER, MALLORY-WEISS TEAR, AORTO-ENTERIC FISTULA

97. BLOOD IN STOOL

- **ESSENTIAL**
 - INFLAMMATORY BOWEL, BRISK UPPER GI BLEEDING, HEMOLYTIC-UREMIC SYNDROME
- **SECONDARY**
 - INFECTIOUS COLITIS, DIVERTICULAR DISEASE, ANGIODYSPLASIA, COLON CANCER, HENOCHE-SCHONLEIN PURPURA

98. HEARTBURN (VOMITING/NAUSEA/ANOREXIA/INDIGESTION)

- **ESSENTIAL**
 - ANGINA/MYOCARDIAL INFARCTION
 - GASTROINTESTINAL CAUSES: PEPTIC ULCER DISEASE, INFLAMMATORY BOWEL
 - METABOLIC CAUSES OF NAUSEA AND VOMITING: ADDISON'S, RENAL FAILURE (SEE 34, 44), HYPOTHYROID (SEE 48B), DIABETES MELLITUS (SEE 53), HYPERCALCEMIA (SEE 54A)
- **SECONDARY**
 - GASTROINTESTINAL CAUSES: ESOPHAGITIS BILIARY COLIC, CHRONIC PANCREATITIS, ABDOMINAL MALIGNANCY
 - NAUSEA FROM RAISED INTRACRANIAL PRESSURE

99. ABDOMINAL DISTENSION/MASS/VISCEROMEGALY/ASCITES

- **ESSENTIAL**
 - HIGH ALBUMIN GRADIENT CAUSES: CIRRHOSIS (PORTAL HYPERTENSION), NEPHROTIC SYNDROME, CONGESTIVE HEART FAILURE/RIGHT HEART FAILURE/ PERICARDIAL DISEASE
- **SECONDARY**
 - HIGH ALBUMIN GRADIENT CAUSES: BUDD-CHIARI, TRICUSPID REGURGITATION,
 - LOW ALBUMIN GRADIENT CAUSES: PERITONEAL CARCINOMATOSIS (97%), PERITONEAL TUBERCULOSIS, PERITONEAL FUNGAL INFECTION, CHYLOUS ASCITES, PANCREATITIS
 - CAUSES OF:
 - CONSTIPATION/BLOATING
 - HEPATOMEGALY
 - SPLENOMEGALY (SEE 12)

100. JAUNDICE/ABNORMAL LIVER ENZYMES

- **ESSENTIAL**
 - JAUNDICE
 - PREHEPATIC CAUSES: HEMOLYSIS
 - HEPATIC CAUSES: ACUTE VIRAL HEPATITIS (ESP. B AND C), CIRROSIS, ACUTE ALCOHOLIC HEPATITIS (SEE 76)
 - ELEVATED LIVER ENZYMES
 - CHRONIC LIVER DISEASE, HEPATOCELLULAR PICTURE
 - HEPATITIS B AND C
 - HEMOCHROMATOSIS
 - CHRONIC LIVER DISEASE, CHOLESTATIC PICTURE
 - ALCOHOL (SEE 76)
 - PRIMARY BILIARY CIRROSIS
- **SECONDARY**
 - JAUNDICE:
 - PREHEPATIC CAUSES: GILBERT'S
 - HEPATIC CAUSES: ACUTE DRUG-INDUCED HEPATITIS, ISCHEMIC HEPATITIS (SHOCK LIVER)
 - POST HEPATIC CAUSES: STONES, MALIGNANCIES (PANCREATIC, AMPULLARY, CHOLANGIOCARCINOMA)
 - ELEVATED LIVER ENZYMES
 - CHRONIC LIVER DISEASES, HEPATOCELLULAR PICTURE
 - ALPHA₁ANTITRYPSIN DEFICIENCY, WILSON'S DISEASE, AUTOIMMUNE HEPATITIS
 - CHRONIC LIVER DISEASES, CHOLESTATIC PICTURE
 - PRIMARY SCLEROSING CHOLANGITIS, INFILTRATION (FAT, AMYLOID, GRANULOMAS, MALIGNANCY)

101. CHANGE IN BOWEL HABIT

- **ESSENTIAL**
 - CAUSES OF CHRONIC DIARRHEA
 - ULCERATIVE COLITIS, CROHN'S DISEASE, IRRITABLE BOWEL SYNDROME
 - CAUSES OF ACUTE DIARRHEA
 - INFECTIONS
 - HEMOLYTIC-UREMIC SYNDROME
 - INFLAMMATORY
 - ULCERATIVE COLITIS, CROHN'S DISEASE
- **SECONDARY**
 - CAUSES OF CHRONIC DIARRHEA
 - CELIAC DISEASE
 - CAUSES OF ACUTE DIARRHEA
 - LARGE BOWEL PREDOMINANT ORGANISMS
 - SHIGELLA, CAMPYLOBACTER, E.COLI 0157, ENTAMOEBA HISTOLYTICA

- CLOSTRIDIUM DIFFICILE
- SMALL BOWEL PREDOMINANT ORGANISMS:
- VIRUSES, SALMONELLA, YERSINIA, TOXIGENIC E.COLI (TRAVELLERS),GIARDIA

Skills Objectives

Physical Examination

At the end of the eight-week clerkship, the clerk will be able to demonstrate the following clinical skills as shown by successful in-training performance evaluation reports.

IMPORTANT SKILLS TO DEMONSTRATE DURING THE MEDICINE ROTATION

1. Assess a patient's volume status.
2. Interpret vital signs.
3. Demonstrate correct technique for determining blood pressure.
4. Properly examine the fundus for diabetes, hypertension, and raised intracranial pressure.
5. Examine the thyroid. Assess thyroid function clinically.
6. Interpret jugular venous pulse.
7. Examine for signs of congestive heart failure and pericardial tamponade.
8. Examine the heart and interpret cause of murmur.
9. Examine for peripheral arterial disease.
10. Examine for the most reliable signs of:
 - i. pleural effusion;
 - ii. consolidation;
 - iii. airway obstruction;
 - iv. loss of volume;
 - v. clubbing.
11. Examine the liver. Identify signs of liver disease.
12. Examine for the presence of ascites.
13. Examine for splenomegaly.
14. Examine for lymphadenopathy
15. Perform a digital rectal examination.
16. Examine the breasts for evidence of cancer.
17. Examine the prostate and testicles for evidence of cancer or BPH.
18. Demonstrate examination of hands, knees, hips, and feet, and findings of rheumatoid arthritis.
19. Differentiate septic arthritis from osteoarthritis and rheumatoid arthritis.
20. Differentiate upper motor neuron findings from lower motor neuron findings.
21. By history and physical findings, localise a lesion to:
 - i. cerebral hemisphere;
 - ii. brainstem;
 - iii. spinal cord;
 - iv. root or peripheral nerve
22. Perform a general screen for the musculoskeletal system (GALS).

Medical Procedures and Tests

At the end of the eight-week clerkship, the clerk will be able to, where appropriate, interpret the following procedures and tests as demonstrated by active participation in Friday Teaching Rounds, summative written examination, and the in-training performance evaluation reports. Opportunities to perform certain procedures may be limited and not expected on this rotation. However, if you are keen to observe or participate in performing procedures, please ensure you inform your supervising residents and staff so they can try to include you in any bedside procedures that may be required for your patients.

1. Arterial blood gas - *Interpret*

2. Urinalysis (microscopic) - *Interpret patterns of:*
 - i. glomerulonephritis;
 - ii. pyelonephritis;
 - iii. hematuria;
 - iv. pyuria;
 - v. proteinuria;
 - vi. crystals.

3. ECG
 - i. ischemia changes;
 - ii. supraventricular tachycardias;
 - iii. ventricular arrhythmias;
 - iv. heart block;
 - v. hyperkalemia.

5. Basic Radiology - *Interpret*
 - i. chest x-ray (pneumonia, pulmonary edema, COPD, interstitial infiltrates, nodules, pleural effusions);
 - ii. abdominal - three views (bowel obstruction, perforation);
 - iii. spine/pelvis x-rays (osteoporosis, metabolic and metastatic bone disease).
 - i. Thoracentesis/Paracentesis transudates;
 - ii. exudates.

4. Basic Spirometry – *Interpret*

5. Peripheral Blood Smear – *Interpret*

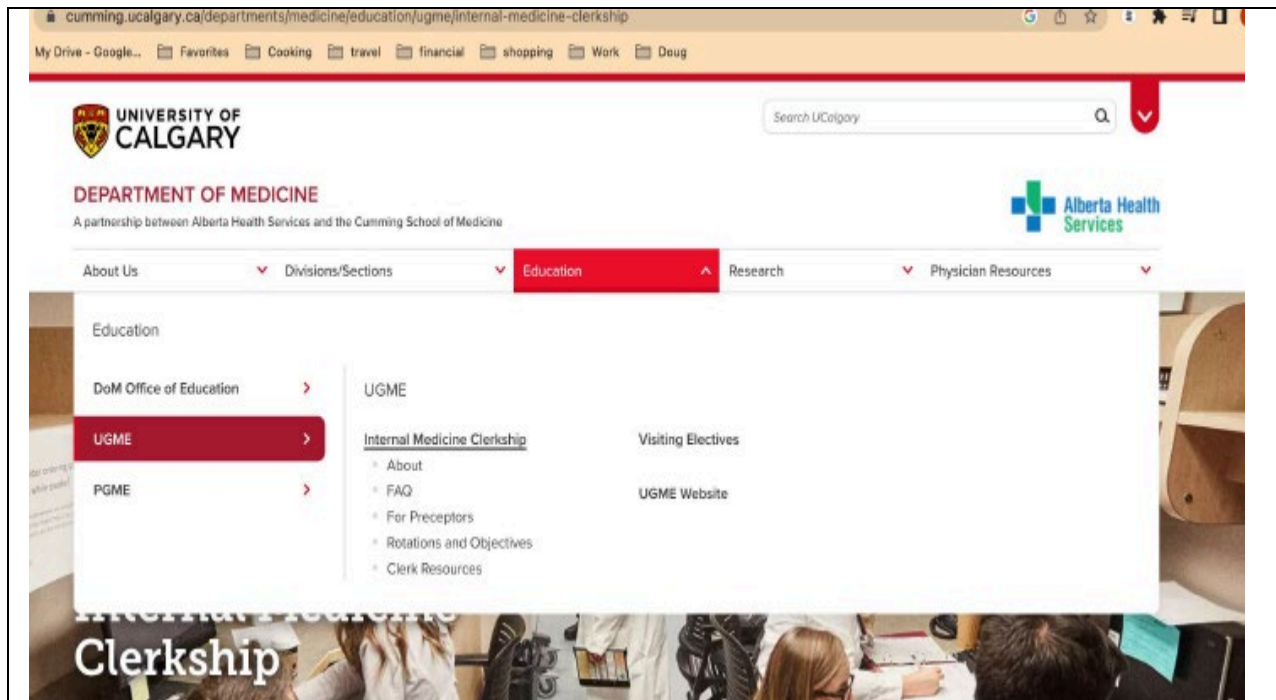
6. Fecal Occult Blood Testing

7. *Pleural, peritoneal, joint fluid - Interpret*

Medical Charting

At the end of the eight-week clerkship, the clerk will be able to demonstrate accurate, complete, clear, and insightful medical records as shown by successful completion of the in-training performance evaluation reports.

The medical chart is a legal document. Do not remove originals from this chart if you are leaving the unit. Make a copy first!!! Ensure all copies of patient information are kept confidential. There are confidential shredding recycling bins around the hospital for this reason: your copies must go in there.



Department of Medicine homepage, under the Education/UGME tab

<https://cumming.ucalgary.ca/departments/medicine/education/ugme/internal-medicine-clerkship>

Rotation and Objectives - <https://cumming.ucalgary.ca/departments/medicine/education/ugme/internal-medicine-clerkship/rotations-and-objectives>

Please refer to core document on OSLER - <https://osler.ucalgary.ca/>

Course Text(s)/Recommended Reading/Learning Resources

Further specific and detailed information can be found on the internal medicine clerkship website at <https://cumming.ucalgary.ca/departments/medicine/education/ugme/internal-medicine-clerkship/rotations-and-objectives> as well as OSLER <https://osler.ucalgary.ca/>. These additional resources and helpful tips including first day contacts and objectives for subspecialty rotations, examination blueprints and on-call “survival guides”.

Evaluation and Course Requirements

INTERNAL MEDICINE (Class of 2024)

- Final Written MCQ (summative) = MP
- Satisfactory Final Preceptor ITERS = MP
- Formative Midpoint MCQ = MC*
- MTU Midpoint Formative Feedback Document = MC
- Logbook = MC*
- On-call Expectations = MC
- Clinical Expectations = MC
- Attendance and participation in teaching sessions = MC
- Professionalism Expectation = MP
- Meet all expectations outlined in Core Document = MC

INTERNAL MEDICINE (Class of 2025)

- Final Written MCQ (summative) = MP
- Satisfactory Final Preceptor ITERS = MP
- Formative Midpoint MCQ = MC*
- MTU Midpoint Formative ITER = MC
- Selective Midpoint Formative ITERs = MC
- Logbook = MC*
- On-call Expectations = MC
- Clinical Expectations = MC
- Attendance and participation in teaching sessions = MC
- Professionalism Expectation = MP
- Meet all expectations outlined in Core Document = MC

MP = must pass (failure to do so will result in overall evaluation of “Unsatisfactory” for rotation)

MC = must complete (failure to do so will result in overall evaluation of “Satisfactory with Performance Deficiency” for rotation)

MC* = must complete before rotation deadline (failure to do so will result in requirement to defer summative examination to the deferral/rewrite date)

Please refer to Clerkship Student Handbook - <https://cumming.ucalgary.ca/mdprogram/current-students/clerkship/student-handbook> and core document on OSLER - <https://osler.ucalgary.ca/>

Calculators for MCQ exam – simple calculators are allowed for your exams.

Assessment Dates

The assessment dates provided in the Evaluation and Course Requirements may be subject to change due to circumstances beyond the MD Program’s control. In the event that an assessment date must be changed notification of the change will be emailed to the student by the evaluation team and posted on OSLER. Students will be given as much notice of the assessment date change as possible.

The pre-clerkship schedule of all courses can be found on the timetable here <https://cumming.ucalgary.ca/mdprogram/current-students/pre-clerkship-year-1-2/timetable>
 The detailed day by day schedule is found on Osler. <https://osler.ucalgary.ca/>

Grading

The University of Calgary Medical Doctor Program is a Pass/Fail program. The grading system that will appear on a student's legal transcript is as follows:

Grade	Description
CR	Completed Requirements
RM	Remedial Work Required
F	Fail
I	Incomplete
W	Withdrawal
MT	Multi-Term (Used for Part A Courses that fall under 2 different terms in the calendar year.)

For Pre-Clerkship - A student's final grade for the course is the sum of the separate components. It is not necessary to pass each mandatory component separately in order to pass the course.

For Clerkship - A rotation signed off as "Satisfactory with Performance Deficiencies" will appear as a credit on a student's medical school transcript.

Assignments/Projects

The following criteria shall generally apply to all written assignments. Students are expected to submit all major assignments on or before the due dates. Unless prior arrangements have been made, major assignments worth marks submitted after the specified due date will be considered late. Late major assignments will receive a 0 % grade. Other assignments will not be accepted after the due date.

Timeliness

In general, dates listed in Core Documents are intended to act as guidelines for assisting students to complete their learning activities and assignments in a timely fashion. Students encountering difficulties completing assignments due to health or other serious factors must contact the Course Chair to arrange a deferral of term work. A Physician/Counsellor Statement to confirm an absence for health reasons may be required.

Professional Conduct

As members of the University community, students and staff are expected to demonstrate conduct that is consistent with the University of Calgary Calendar. The specific expectations cited in the Calendar include

- Respect for the dignity of all persons
- Fair and equitable treatment of individuals in our diverse community
- Personal integrity and trustworthiness
- Respect for academic freedom, and
- Respect for personal and University (or Host Institution) property.

Students and staff are expected to model behaviour in class that is consistent with our professional values and ethics. Students and staff are also expected to demonstrate professional behaviour in class that promotes and maintains a positive and productive learning environment. All students and staff are

also expected to respect, appreciate, and encourage expression of diverse world views and perspectives. All members of the University community are expected to offer their fellow community members unconditional respect and constructive feedback. While critical thought and debate is valued in response to concepts and opinions shared in class, feedback must at all times be focused on the ideas or opinions shared and not on the person who has stated them.

Where a breach of an above-mentioned expectation occurs in class, the incident should be reported immediately to the Associate Dean or his/her designate. As stated in the University Calendar, students who seriously breach these guidelines may be subject to a range of penalties ranging from receiving a failing grade in an assignment to expulsion from the University.

University of Calgary Medical School – Student Code of Conduct

<https://cumming.ucalgary.ca/mdprogram/current-students/pre-clerkship-year-1-2/student-code-conduct>

Electronic Submission of Course Work

Most assignments will be submitted via email to the Program Coordinator, UME unless otherwise stated. Assignments may be submitted in MS Word or Rich Text formats. It is the student's responsibility to confirm with the Program Coordinator that the assignment has been received. This may be done through utilization of the return receipt function available on most email packages, or by a follow up confirmation email to the Program Coordinator.

It is the Program Coordinator's responsibility to reply to any confirmation email from the student, and to inform the student promptly if there are any problems with the file (unable to open attachment, damaged data, etc.). In such cases, it is the responsibility of the student to promptly consult with the Program Coordinator regarding an alternate delivery method (e.g. courier, fax, etc.). It is the student's responsibility to retain a copy of the original document.

One45 Overview

The MD Program utilizes the One45 Software Program for assessment purposes for all evaluations in Year 1, 2 and 3. Students are able to view completed evaluations online through this software program. Evaluations and assessment data are collected at regular intervals.

It is the student's responsibility to distribute their evaluations to preceptors during any given course and to follow up with preceptors if evaluations have not been completed by the deadline given out by the Undergraduate Medical Education (UME) Office.

In addition to assessments and evaluations, One45 is also utilized to evaluate your preceptors and to gather information from students on their learning experiences.

All students are provided training at the beginning of their program in Year 1. This would include a personal log in access code and password.

One45 is used throughout your training in the MD Program (Undergrad) as well as Residency (PGME).

Website Link to Access One45: <https://calgary.one45.com/>

Problems Accessing One45: Please contact the Academic Technologies at osler@ucalgary.ca

Course Evaluation/Feedback

Student feedback will be sought at the end of each learning session as well as at the end of each course through the electronic UME evaluation tool.

At the end of each learning activity (ie. Lecture, small group, orientations, etc.), students will be asked to complete online evaluation forms to provide feedback to instructors regarding the effectiveness of their teaching and achievement of the learning objectives. An overall course evaluation will be completed following course completion.

Students are welcome to discuss the process and content of the course at any time with the Course Chairs or Preceptors.

Clinical Core Overview (Pre-Clerkship Only)

Please refer to the Clinical Correlation Guidelines here:

<https://cumming.ucalgary.ca/mdprogram/about/governance/policies>

Course specific learning objectives for Clinical Core in the setting of this course can be found in the course documents.

Clinical Correlation Rules of Conduct

Students and preceptors will not be used as patients for clinical correlation sessions. This means that students will not examine the preceptor, the preceptor will not examine the students and students will not examine one another.

UME Policies, Guidelines, Forms, & TORs

Please refer to the MD program website

<https://cumming.ucalgary.ca/mdprogram/about/governance>

Reappraisals and Appeals

Please refer to the CSM Reappraisal of Graded Term Work and Academic Assessments and CSM UME Academic Assessment and Graded Term Work Procedures for details regarding reappraisals and appeals <https://cumming.ucalgary.ca/mdprogram/about/governance/policies>

Please note by policy and terms of reference if you plan to request a reappraisal of the result(s) of this exam/course, a formal reappraisal request in writing needs to be submitted to md.reappraisals@ucalgary.ca within 10 days of receiving the result.

If the student disagrees with the decision of the UME Student Evaluation Committee, the student may appeal that decision to the UME University Faculty Appeals Committee. Please refer to the [CSM UME Academic Assessment and Graded Term Work Procedures](#) for procedure for appeals. <https://cumming.ucalgary.ca/mdprogram/about/governance>

Academic Accommodation

Students needing an accommodation because of a disability or medical condition should contact Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities available <https://live-ucalgary.ucalgary.ca/student-services/access>.

Student Accessibility Services, please contact their office at (403) 220-8237, visit: MacEwan Student Centre room 452 or email: access@ucalgary.ca. Students who have not registered with the Student Accessibility Services are not eligible for formal academic accommodation.

Accommodations on Protected Grounds Other Than Disability

Students who require an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a protected ground other than disability, should communicate this need, preferably in writing, to the appropriate Assistant or Associate Dean

Students who require an accommodation unrelated to their coursework, based on a protected ground other than disability, should communicate this need, preferably in writing, to the Vice-Provost (Student Experience).

For additional information on support services and accommodations for students with disabilities, visit <https://live-ucalgary.ucalgary.ca/student-services/access>

Academic Integrity

The University of Calgary 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.

It is expected that all work submitted in assignments should be the student's own work, written expressly by the student for this particular course. Students are referred to the section on academic integrity in the University Calendar (<https://www.ucalgary.ca/pubs/calendar/current/k-3.html>) and are reminded that plagiarism is an extremely serious academic offence.

Student Misconduct

A single offence of cheating, plagiarism, or other academic misconduct, on term work, tests, or final examinations, etc., may lead to disciplinary probation or a student's suspension or expulsion from the faculty by the Dean, if it is determined that the offence warrants such action. A student is defined as any person registered at the University for credit or non-credit courses.

Freedom of Information and Protection of Privacy

The Freedom of Information and Protection of Privacy (FOIP) Act indicates that assignments given by you to your course instructor will remain confidential, unless otherwise stated, before submission. The assignment cannot be returned to anyone else without your express permission. Similarly, any information about yourself that you share with your course instructor will not be given to anyone else without your permission.

Emergency Evacuations and Assembly Points

Assembly points for emergencies have been identified across campus. The primary assembly point for the Health Sciences Centre (HSC) building is HRIC - Atrium. For more information, see the University of Calgary's Emergency Management website: <https://www.ucalgary.ca/risk/emergency-management/evac-drills-assembly-points/assembly-points>

Emergency Evacuation Procedures - <https://www.ucalgary.ca/risk/emergency-management/plans-and-procedures>. In the case of an emergency during exam, immediately stop writing the examination and follow the direction of the invigilator and go to the nearest exit. Students should not gather personal belongings.

Internet and electronic device information and responsible use:

Students are welcome to use laptops and other electronic note-taking devices in this course unless otherwise stated. Please be considerate of others when using these devices.

Supports for student learning, success, and safety

Student Advocacy & Wellness Hub (SAWH):

<https://cumming.ucalgary.ca/student-advocacy-wellness-hub/home>

AMA Physician and Family Support Program:

<https://www.albertadoctors.org/services/physicians/pfsp>

Student Union Wellness Centre: <https://www.ucalgary.ca/wellnesscentre/>

Safewalk: <http://www.ucalgary.ca/security/safewalk>

Campus security - call (403) 220-5333

Student Success Centre: <https://www.ucalgary.ca/ssc/>

Library Resources: <http://library.ucalgary.ca/>

Student Union (<https://www.su.ucalgary.ca/about/who-we-are/elected-officials/>) or Graduate Student's Association (<https://gsa.ucalgary.ca/about-the-gsa/gsa-executive-board/>) representative contact information

Student Ombudsman: <http://www.ucalgary.ca/ombuds/role>

Copyright

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy>) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

Wellness and Mental Health Resources

The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness, and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the excellent mental health resources available throughout the University community such as counselling, self-help resources, peer support, or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, <https://www.ucalgary.ca/wellnesscentre/services/mental-health-services>) and the Campus Mental Health Strategy website (<http://www.ucalgary.ca/mentalhealth>).

Research Ethics

If a student is interested in undertaking an assignment that will involve collecting information from members of the public, he or she should speak with the Assistant Dean, Research (UME) and consult the CHREB ethics website (<https://ucalgary.ca/research/researchers/ethics-compliance/chreb>) before beginning the assignment.

ATSSL Guidelines

Please refer to the ATSSL Web Lab PPE Requirement:

<http://www.ucalgary.ca/mdprogram/about-us/ume-policies-guidelines-forms-terms-reference>