



WINDSOR UNIVERSITY SCHOOL OF MEDICINE

INTERNAL MEDICINE



THIS INSTITUTION IS POSITIONED AS AN AFFORDABLE INTERNATIONAL ENVIRONMENT FOR CULTURALLY DIVERSE STUDENTS TO GAIN CORE COMPETENCIES REQUIRED FOR GRADUATE AND POST GRADUATE TRAINING.

Contents

| | |
|--|----|
| Links For Evaluation Forms | 3 |
| Introduction: | 4 |
| Specific Learning Objectives For Internal Medicine – | 5 |
| Specific Elements Of The Internal Medicine Curriculum Include: | 5 |
| MEDICAL KNOWLEDGE | 5 |
| CLINICAL SKILLS | 5 |
| PROFESSIONAL BEHAVIOR | 5 |
| Core Topics of Internal Medicine: | 7 |
| Week 1 Lecture Topics: Cardiovascular | 7 |
| Week 2 Lecture Topics: Gastrointestinal and liver disease: | 7 |
| Week 3 Lecture Topics: Endocrinology and metabolism: | 7 |
| Week 4 Lecture Topics: Hematological disorders and oncological disorders: | 7 |
| Week 5 Lecture Topics: Pulmonary: | 8 |
| Week 6 Lecture Topics: Infectious disease: | 8 |
| Week 7 Lecture Topics: Renal disease: | 8 |
| Week 8 Lecture Topics: Rheumatology and musculoskeletal disease: | 8 |
| Week 9 Lecture Topics: Neurosciences: | 9 |
| Week 10 Lecture Topics: Dermatology: | 9 |
| Week 11 Lecture Topics: Substance abuse: | 9 |
| Preceptor’s “Teaching Schedule Template”: | 10 |
| Internal Medicine Procedures To Be Observed By Student During This Core Rotation: | 11 |
| Basic Internal Medicine Procedures a Student MUST be Supervised and Performed During This Internal Medicine Rotation: | 12 |
| Web Based Educational Assignments For Independent Learning | 13 |
| Evaluations And Grading | 14 |
| A. The Formative Mid-core Evaluation | 14 |
| B. The Summative Final Evaluation | 14 |
| Clinical Performance: | 15 |
| a. OSCE(s) and Oral Examination: | 16 |
| b. NBME Exam | 17 |
| c. Examination Policies and Procedures | 17 |
| Required Reading: | 18 |

Appendices in Clinical Training Manual:

Appendix A: Clinical centers and affiliated hospitals Pg. 61

Appendix B: The logbook of manual skills and procedures Pg. 62;

Optional manual skills and observed procedures (Pg.86)

Appendix C: Rotation evaluation form Pg. 66

Appendix D: Midcore Evaluation Pg. 69

Appendix E: Midcore rotation reference forms Pg. 70

Appendix F: Student Evaluation of the Clinical Rotation Pg. 92

Appendix G: Student Evaluation of the Clinical Preceptor Pg. 93

Appendix J: Oral exam form Pg. 100

Appendix K: OSCE Marking Rubrics Pg. 102

LINKS FOR EVALUATION FORMS

Midcore Evaluation: <http://www.questionpro.com/t/ALT4jZS0fQ>

Final Preceptor Evaluation: <http://www.questionpro.com/t/ALT4jZS0fc>

Student Evaluation of Clinical Preceptor: <http://www.questionpro.com/t/ALT4jZSwFo>

Student Evaluation of Clinical Rotation: <http://www.questionpro.com/t/ALT4jZSymE>

INTRODUCTION:

Internal Medicine is a 12-week core clinical rotation which includes in-hospital patient care which might be coupled with outpatient and private office experience where permitted by state law, creating a learning environment in which clinical competence can be achieved. In addition to acquiring knowledge and skill, students should gain the ability to gather essential and accurate patient information by medical history and physical examination. Students develop investigatory and analytical clinical thinking based on the understanding of the pathophysiology of disease. They should apply knowledge of the structure function of the body, major organ systems and of the molecular cellular and biochemical mechanisms. The student should develop an understanding of the scientific basis of the practice of medicine. In the course of the clinical rotations they should develop a personal program of self-study and professional growth with the guidance of the clinical teaching faculty. They should also demonstrate compassion and empathy in patient care maintaining the highest moral and ethical values. There should be a demonstrative sensitivity to culture, age, gender, and disability as they apply to patients. The students should demonstrate an understanding of the relationships among the various aspects of healthcare delivery.

Students gain general knowledge of internal medicine, which includes health promotion, disease prevention, diagnosis and treatment of men and women from adolescence through old age, from times of health through all stages of acute and chronic illness. Additionally students develop skills in problem solving, decision making and an attitude of caring driven by humanistic and professional values. This rotation incorporates a consideration of human biology, behavior, and understanding of the epidemiology and path physiology of disease and the mechanisms of treatment. Students master clinical skills in interviewing, physical examination, differential diagnosis, diagnostic testing strategies, therapeutic techniques, counseling, and disease prevention.

SPECIFIC LEARNING OBJECTIVES FOR INTERNAL MEDICINE –

Students gain general knowledge of internal medicine, which includes health promotion, disease prevention, diagnosis and treatment of men and women from adolescence through old age, from times of health through all stages of acute and chronic illness. Additionally, students develop skills in problem solving, decision making and an attitude of caring driven by humanistic and professional values. This rotation incorporates a consideration of human biology, behavior, and understanding of the epidemiology and path physiology of disease and the mechanisms of treatment. Students master clinical skills in interviewing, physical examination, differential diagnosis, diagnostic testing strategies, therapeutic techniques, counseling, and disease prevention.

SPECIFIC ELEMENTS OF THE INTERNAL MEDICINE CURRICULUM INCLUDE:

MEDICAL KNOWLEDGE

Demonstrate knowledge of the principal syndromes and illnesses in Internal Medicine, their underlying causes both medically and socially and the various diagnostic and therapeutic options available to physicians in the care of their patients. Demonstrate knowledge of the indications for and the ability to interpret standard diagnostic tests, e.g., chemistries, chest x-rays, urinalysis, EKGs, as well as other relevant specialized tests.

Recognize unusual presentations of disease in elderly patients and demonstrate understanding of the complexity of providing care for the chronically ill with multiple medical problems. This should include an understanding of end of life issues, as well as bioethical, public health and economic considerations which arise in our health care system. Demonstrate knowledge of the indications for various levels of care post-discharge, e.g., short and long term rehabilitation, long-term skilled nursing facility care, hospice, home care, etc.

CLINICAL SKILLS

Take a comprehensive history and perform a complete physical exam; formulate a differential diagnosis and therapeutic plan, employing concern for risks, benefits, and costs. Document clearly and proficiently.

Demonstrate facility in communication with patients, families and other care givers in a culturally competent manner. Analyze and document additional clinical information, lab tests and changes in patients' clinical status; note changes in the differential diagnosis or in the diagnostic or therapeutic plans as circumstances and test results themselves change. Demonstrate proficiency in basic procedures, such as venipuncture, arterial puncture, naso-gastric tube insertion, insertion of intravenous lines, urinary bladder catheterization, etc. Observe more complex procedures such as thoracentesis, lumbar puncture, and central line insertion and ventilator management.

PROFESSIONAL BEHAVIOR

Demonstrate a regimen of independent learning through the reading of suggested basic texts, research via the Internet and through other electronic resources, e.g., Up-To-Date, maintenance of the patient encounters log and completion of the web-based educational program requirements.

Demonstrate a commitment to quality, patient safety and self-directed improvement.

Demonstrate competency and comfort in dealing with people of varying racial, cultural, and religious backgrounds. Demonstrate a commitment to treating all patients, families and other caregivers with

respect. Participate fully with the patient care team and fulfill all responsibilities in a timely fashion. Maintain a professional appearance and demeanor. Demonstrate facility in working in concert with other caregivers, nutritionists and social workers/discharge planners to obtain optimal, seamless multidisciplinary care for their patients, both during the hospitalization and after discharge.

Interpersonal and Communication Skills - Students must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

Practice-Based Learning and Improvement (PBLI) - The ability to investigate and evaluate their patient care practices, appraise and assimilate scientific evidence, and improve their patient care practices.

Systems-Based Practice (SBP) - Students must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

CORE TOPICS OF INTERNAL MEDICINE:

Week 1 Lecture Topics: Cardiovascular

- Causes of Chest pain of Cardiac, pericardial and thoracic causes
- Myocardial infarction and angina
- Congestive heart failure
- Valvular heart disease
- Arrhythmias and the interpretation of EKG findings
- Essential hypertension vs. Secondary Hypertension and its evaluation
- Peripheral arterial disease
- Deep vein thrombosis Pulmonary Emboli and its complications

Quiz 1: Cardiovascular (End of Week 1)

Week 2 Lecture Topics: Gastrointestinal and liver disease:

- Evaluation of abdominal pain from Medical perspective
- Gastroesophageal reflux disease
- Peptic ulcer disease and disorders of the stomach
- Assessment of inflammatory bowel disease
- Acute and chronic diarrhea
- Causes of Vomiting
- Colorectal and anal disorders
- Gastrointestinal bleeding from Medical Perspective
- Acute and chronic hepatitis, and other hepatic disorders
- Cirrhosis (Alcoholics and infectious)
- Ascites (cardiac vs. Hepatic)
- Diseases of the biliary tract and pancreas from Medical Perspective

Quiz 2: Gastrointestinal and Liver Diseases (End of Week 2)

Week 3 Lecture Topics: Endocrinology and metabolism:

- Diabetes mellitus (Type 1 and 2)
- Hyperlipidemia and hypercholesterol
- Abnormal weight loss or weight gain
- Obesity vs. Anorexic Nervosa
- Thyroid and parathyroid disease
- Adrenal insufficiency and Cushing's disease
- Abnormalities of the hypothalamic pituitary axis
- Osteoporosis
- Renal causes of Hypertension

Quiz 3: Endocrinology and Metabolism (End of week 3)

Week 4 Lecture Topics: Hematological disorders and oncological disorders:

- Anemia (all causes)
- Abnormalities of white blood cell count
- Increased or decreased platelet count
- Leukemias and myeloproliferative disorders
- Multiple myeloma and lymphomas
- Cancer pathogenesis, evaluation and treatment options of more common cancers

Quiz 4: Hematological and Oncological Disorders (End of Week 4)

Week 5 Lecture Topics: Pulmonary:

- Shortness of breath
- Causes of Cough
- Asthma (intrinsic, extrinsic and exercise induced)
- Chronic obstructive pulmonary disorders
- Pulmonary fibrosis
- Cystic Fibrosis
- Pleural effusion
- Pulmonary Infections
- Sleep apnea

Quiz 5: Pulmonary (End of Week 5)

Week 6 Lecture Topics: Infectious disease:

- A general approach to fever
- Septic or urosepsis shock
- Causes of lymphadenopathy
- Food poisoning
- Gastroenteritis and worms
- Bacteremia
- Upper respiratory infection
- HIV disease and other viral diseases
- Nosocomial infections
- Meningitis
- Vector borne infections (Zika, Dengue, Rabies, etc.)

Quiz 6: Infectious Diseases (End of week 6)

Week 7 Lecture Topics: Renal disease:

- Acute renal failure
- Chronic renal failure
- Dialysis
- Acid based disorders
- Electrolyte disorders
- Disorders of calcium and phosphorous metabolism
- Management of arterial blood gas findings
- Nephrotic Syndrome
- Nephritis
- UTI and pyelonephritis

Quiz 7: Renal Diseases (End of Week 7)

Week 8 Lecture Topics: Rheumatology and musculoskeletal disease:

- Approach to joint pain
- Septic arthritis
- Rheumatoid arthritis
- Osteoarthritis
- Gout

- Systemic lupus erythematosus
- Fibromyalgia
- Acute and chronic back pain
- Pain management techniques

Quiz 8: Rheumatology and musculoskeletal disease (End of week 8)

Week 9 Lecture Topics: Neurosciences:

- Altered mental status (Alzheimer's, traumatic concussions, DT)
- Headaches (Simple to Migraine)
- Syncope
- Cerebrovascular accidents (Stroke and TIA)
- Peripheral neuropathy
- Paralysis
- Neuro-degeneration (Immunological causes)

Quiz 9: Neurosciences (End of Week 9)

Week 10 Lecture Topics: Dermatology:

- Dermatitis
- Infectious and fungal skin lesions
- Cutaneous manifestations of more general systemic disorders
- Dermatologic benign and malignant lesions

Quiz 10: Dermatological Tissue lesions (End of week 10)

Week 11 Lecture Topics: Substance abuse:

- Alcoholism and substance abuse as it relates to general internal medicine and Patient behaviors
- Smoking cessation
- Drug rehab
- Over Dose

Quiz 11: Substance Abuse (End of Week 11)

PRECEPTOR'S "TEACHING SCHEDULE TEMPLATE":

Preceptor's name: _____

| | Morning Rounds | Out-Patient Clinics | Private Office (schedule 2-3 students per day OBSERVATION ONLY) | Hospital Ground Rounds and CME rounds | Didactic Teaching (Core Topics 5-6 hours /week) | Preceptor or Resident On-call Schedule (2-3 students/call) | Help Schedule (2 hours Per week) | Other |
|--------|----------------|---------------------|---|---------------------------------------|---|--|----------------------------------|-------|
| Mon | | | | | | | | |
| Tues | | | | | | | | |
| Wed | | | | | | | | |
| Thurs. | | | | | | | | |
| Fri | | | | | | | | |

INTERNAL MEDICINE PROCEDURES TO BE OBSERVED BY STUDENT DURING THIS CORE ROTATION:

A. Internal Medicine

1. Cardioversion (Internal Medicine)
2. Defibrillation (Internal Medicine)
3. Transcutaneous Pacing (Internal Medicine)
4. Transvenous Pacing (Internal Medicine)
5. Needle Biopsy (any organ)
6. Insertion of Swann Ganz
7. Pulmonary Function Test
8. Incentive Spirometer
9. Urine collection
10. Holter Monitor
11. Urine Dip stick
12. Occult blood test
13. Culture Specimen collection (any kind)
14. EKG hook-up and reading
15. O2 nasal Cannula or by mask
16. Arterial blood sample
17. Central venous line
18. Endotracheal intubation
19. Lumbar puncture
20. Thoracentesis
21. Arthrocentesis
22. Pneumothorax drainage
23. Peritoneal dialysis catheter
24. Bone marrow biopsy and aspirate
25. CPR, adult
26. Suprapubic bladder aspiration
27. Peripheral IV access

**BASIC INTERNAL MEDICINE PROCEDURES A STUDENT MUST BE SUPERVISED
AND PERFORMED DURING THIS INTERNAL MEDICINE ROTATION:**

1. Incentive Spirometer
2. Observe and perform a Complete and Detailed Respiratory and Cardiovascular examination
3. Collection of urine specimen
4. Urine dip stick
5. Guaiac stool collection and testing
6. Urinary cauterization (male or female)
7. O2 nasal Cannula or by mask
8. Holter or EKG hook-up and reading
9. Securing airway by jaw thrust technique
10. Peripheral IV access

WEB BASED EDUCATIONAL ASSIGNMENTS FOR INDEPENDENT LEARNING

Proof of completion of the following three web-based assignments along with your patient log will complete to your portfolio for medicine. As part of their evaluation students need to bring this portfolio to the end-of-clerkship oral exam.

| | |
|-------------------------------------|---|
| MedU Cases | Student will participate in the self-directed web-based learning course: SIMPLE (Simulated Internal Medicine Patient Learning Experiences) The assigned cases will be completed during your rotation. |
| Communication Skills Modules | Students are responsible for DOCCOM Communication Skills Modules 23 “The Geriatric Interview” and 24 “Tobacco Intervention” of the Communication Skills B course. |
| USMLE World | USMLE World Assignment - any 400 Internal Medicine questions |

EVALUATIONS AND GRADING

A. The Formative Mid-core Evaluation

All clerkship directors must arrange for formative mid-core evaluations with all students. These consist of individualized face-to-face meetings with each student and completion of the mid-core evaluation form (Appendix D). This form is not part of students' permanent record and can be kept on file at the hospital with a copy to the Associate Dean of Clinical Sciences. The purpose of this evaluation is to provide students with informal, qualitative feedback early enough in the clerkship to allow time for remediation of deficiencies. This meeting also gives the clinical preceptors an opportunity to help students recognize their strengths. The mid-core evaluation also gives medical students the opportunity to measure their progress in learning.

B. The Summative Final Evaluation

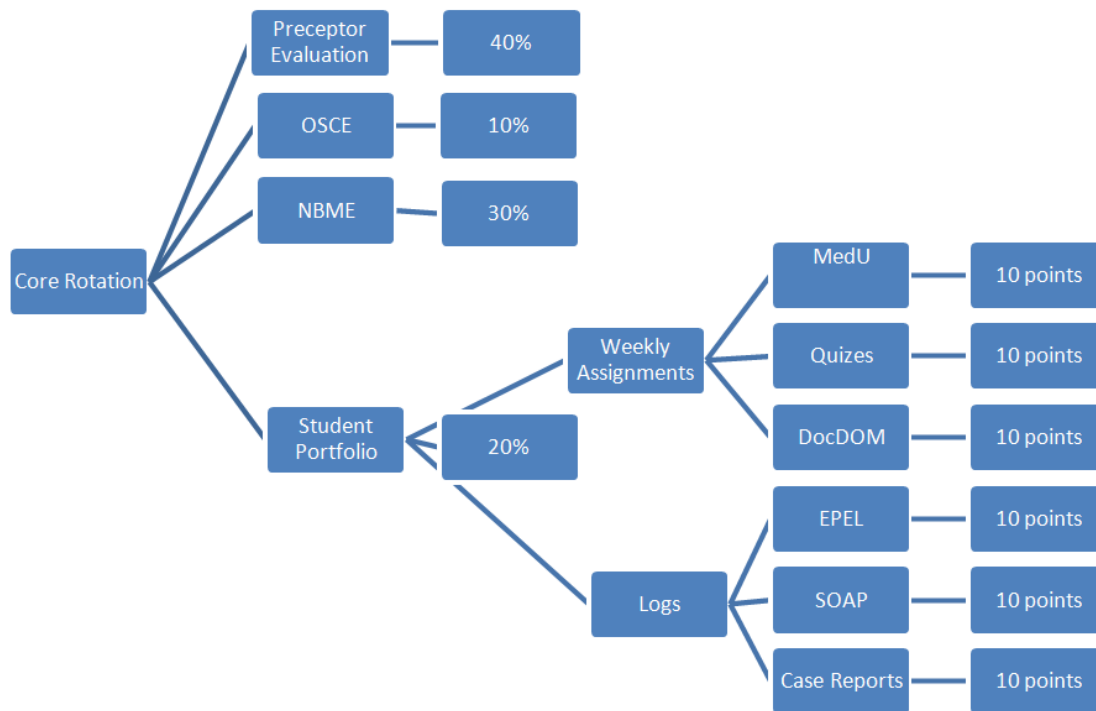
Grading Policy for the Clerkships

The Clinical preceptor completes a final evaluation form for each student in a core clerkship. The form requires narrative comments, grades in individual components and a final summative grade (Appendix C). The narrative comments summarize the student's clinical performance, professional behavior including attendance, rapport with patients and staff and the extent to which the students developed the required competencies for that core. This narrative section offers the faculty the opportunity to provide additional evaluative information beyond the letter grade. Students should make every effort to review these comments as soon as possible after completion of a rotation. The opinions of the physicians who have worked with a student are critical for self-improvement on the part of the student. Constructive criticisms can help a student develop into a more competent physician. Students should attempt to review these comments at the hospital, either from the clerkship director or from the medical education office. Alternatively, students can request a copy of the evaluation form from their clinical student coordinator in the Office of Clinical Studies.

The final grade in the clerkship represents a quantitative average of four components:

- 1) **40%: End of Clerkship Preceptor Evaluation of Student**
- 2) **30%: Core Rotation/ NBME Exam Score**
- 3) **10%: OSCE /Oral Examination.**
- 4) **20%: Student Portfolio**

Refer to Diagram below for further breakdown of student portfolio:



The final grade calculation= Cumulative of above 4 > 65 % to pass.

Grading:

Honors: If you get an A in all 4 areas of evaluation.

In progress: Failure of one area but pass all other areas of evaluation.

Failure: Fail two or more areas of evaluation.

Re-mediation

In progress:

- **Clinical evaluation:** successfully repeat 4 weeks of rotation

- **Clinical Log:** successfully complete all logs

- **OSCE/Oral:** successfully repeat the OSCE

- **Written Exam:** successfully pass exam, up to three attempts

The final grade will be calculated using the new data and will be downgraded one letter grade unless that grade is a "C".

Failure: The student must repeat the entire clerkship.

Clinical Performance:

(40% Preceptor Evaluation, 10% weekly quiz, and 10% Patient Log and 10% MedU and Doccom)

The teaching physicians who work with the student during the rotation evaluate the student's clinical performance in six core competency areas, medical knowledge, clinical skills, professional behavior, Interpersonal and Communication Skills, Proactive based learning and systems-based learning. The more

feedback the evaluator gets from different members of the medical staff that instructed the student, the more objective grades can be. The faculty evaluates the extent to which the student has developed the competencies required for that rotation. The following general goals form the basis of all evaluations. A more comprehensive list of competencies appears in Outcome Objectives of Medical education above.

A mid-core meeting with each student is required in order to discuss the student's performance. Students must print a copy of their Electronic Patient Encounter Log and procedural experience log and present it at the mid-core meeting for review by the Clinical Preceptor. The Clinical Preceptor discusses the log and the student's performance. This discussion should include encouragement if the student is doing well or a warning with constructive criticism if the student is doing poorly. The mid-core evaluation is formative and requires documentation on the WUSM Mid-core evaluation form (see Appendix D).

End of Clerkship Examinations for all Locations: (Virtual Patient or Actor Patient)

a. OSCE(s) and Oral Examination:

Each department has a form for the end-of-clerkship oral exam (appendix J) in conjunction with required document check list (refer to for on page 16 of this document). The end of clerkship oral exam should last at least 20 minutes and requires a one-on-one format involving the student and clinical faculty member. It is used to evaluate independent study and patient log documentation but is primarily a Step 2 CS-type exam.

The first part of the exam requires the examiner to review the portfolio, which each student brings to the exam. This portfolio consists of the patient log and the web-based exams. The examiner first confirms that the student has completed all assignments and has shown a commitment to documentation in the log. The portfolio can be used to evaluate the extent to which the student has studied actively and independently.

After the review of the patient log, the exam should proceed as a Step 2 CS OSCE exam, this has two parts:

1. The integrated clinical encounter (ICE). This is the "classic" exam. The examiner would choose a case, from the student's log for example, and ask the student to "integrate the history, physical findings, lab results, imaging studies, etc. into a reasonable discussion of pathophysiology, differential diagnosis, further work-up and management, etc."

2. Communication skills and interpersonal relationship (CS/IR). This is new and may require some creativity and play-acting on the part of the examiner. Departments could develop a list of "challenging" questions involving ethical issues, e.g., end-of-life decisions, informed consent, delivering bad news, etc. Evaluations here may be difficult and subjective. One way to look at this would be for examiners to ask themselves "If this was an interview, would I take this student into my residency program?" If the answer is negative, we would like to know, in order to remediate the student. The exam form should have a section for such comments. These students may be at high risk for a Step 2 CS failure and/or for not getting a residency because of their lack of interviewing skills. To a certain extent, this can be a formative as well as a summative exam.

b. NBME Exam

The NBME Clinical Subject (Shelf) Exam must be taken by all students toward the end of the core rotation and determines 30% of the final grade during 3rd year Core Rotations but 50% after 4th year (end of Clinical Rotation). Scheduling for this exam is done by Dean's office. Hospitals should excuse students for the entire day in order to take these exams. While the oral exam is based on the student's clinical experience during the rotation, the shelf exam is not. Instead the shelf exam tests students' understanding of the subject as, for example, it might be presented in a concise textbook. Students must sit the shelf exam before starting their next rotation.

c. Examination Policies and Procedures

- All students must attend the Oral Exam as scheduled. No excuses are permitted unless approved by the Clinical Preceptor or AHD.
- All students must attend the NBME exam as scheduled. With rare exception and only after approval by the Dean, a student can take a separate WINDSOR written exam.
- Students who are too ill to take the exam as scheduled should refer to the "Medical Excuse" policy in the Student Manual.
- If for any reason a student misses an oral exam, a make-up exam must be scheduled within 2 weeks with the Clinical Preceptor or AHD.
- If for any reason a student misses an NBME exam, a make-up exam must be scheduled within 2 weeks by contacting Dean's office.

REQUIRED READING:

WUSOM requires all students to complete reading of the Current Medical Diagnosis and Treatment during their Internal Medicine Rotation. The publication is available through Access Medicine for all the Windsor Students.

WUSOM recommends that all students complete the Medical Knowledge Self-Assessment Program for Medical Students (MKSAP), a comprehensive set of test questions prepared by the ACP as a review of Internal Medicine. Questions in this booklet are representative of internal medicine content questions that they will encounter on the USMLE step 2 CK. Students may also refer to other review books geared towards Step 2 CK such as:

- Step-up Medicine
- Master the boards 2 & 3
- MCQs: USMLE World Q bank, MKSAP, Pretest

This booklet is also available for purchase at acponline.org

Students are expected to use general medical textbooks such as Harrison's Internal Medicine for references during the course of their rotation. Online resources such as Up-to-date, Access Medicine, EBSCO host or Interactive cases in New England Journal of Medicine

Windsor University School of Medicine

Clinical Documentation Checklist

Student Name: _____ Student ID: _____

Hospital/Clinic: _____ Preceptor: _____

Date Started: _____ Date Ended: _____ Total Weeks: _____

| S. No | Clinical Documentation/ Skills | Required | Completed | Student Initials |
|-------|--|----------|-----------|------------------|
| 1. | Electronic Patient Encounter Logs (EPEL) | 12 | | |
| 2. | SOAP Notes | 4 | | |
| 3. | Case Reports | 2 | | |
| 4. | MedU Cases | 6/12 | | |
| 5. | DocCom Modules | 2 | | |
| 6. | Mid-core evaluation | 1 | | |
| 7. | Preceptor Evaluation | 1 | | |
| 8. | Core Examination (NBME Shelf) | 1 | | |
| 9. | Procedure Logs | 1 | | |
| 10 | OSCE Skills | 1 | | |
| 11 | Feedback Interview | 1 | | |
| 12 | Student Evaluation of Rotation | 1 | | |
| 13 | Student Evaluation of Preceptor | 1 | | |

Note: It is student's responsibility to complete the above requirements in its entirety with integrity and honesty. Students should get them evaluated by his attending, and submit the same to the clinical department. Failure to do so will result in receiving poor grade in the specific clinical rotation on the transcript.

Student Signature: _____ Date: _____

Attending/Preceptor: _____ Date: _____