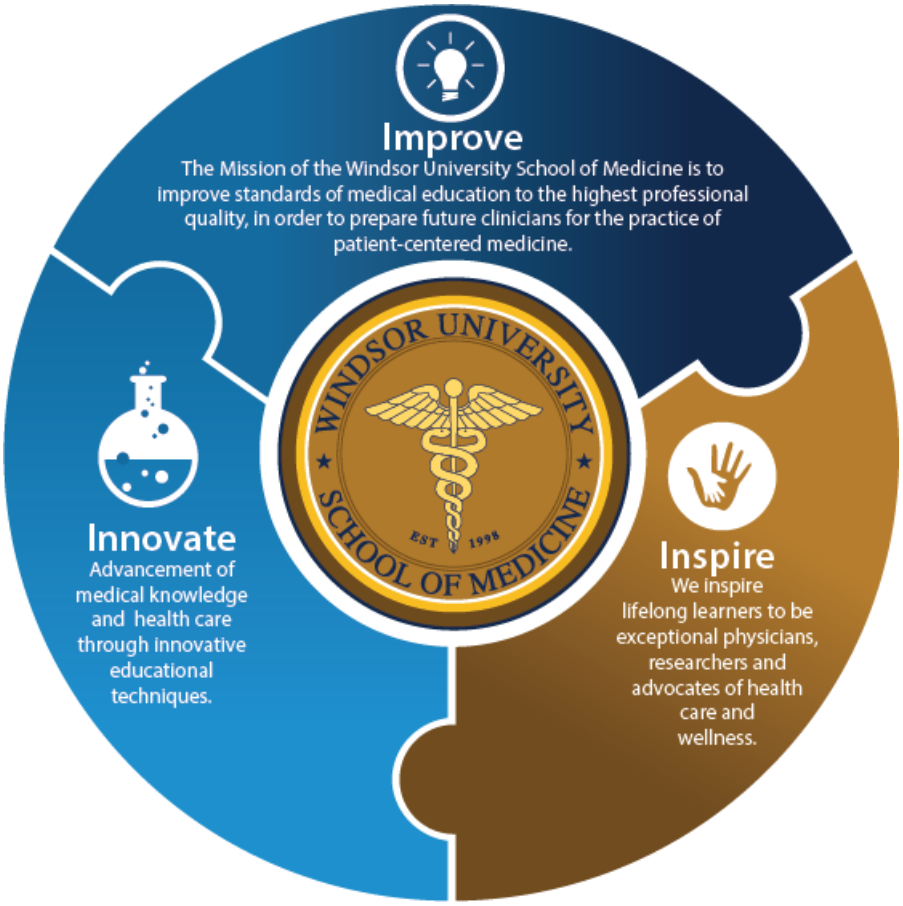
WINDSOR UNIVERSITY
SCHOOL OF MEDICINE

# PEDIATRICS




**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



**Appendices in Clinical Training Manual:**

## 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/ALT4jZSymF

# INTRODUCTION:

Pediatrics clerkship will provide students with a clinical experience that prepares them to communicate effectively with patients and families and learn to evaluate and manage children from newborn through adolescence. The clerkship integrates a foundation of medical knowledge with clinical and communication skills to enable the student to identify and provide quality pediatric care.

After completion of a six-week core clerkship, the students will gain knowledge and clinical experience in evaluating newborns, infants, children and adolescents, both sick and well, through clinical history taking, physical examination and the evaluation of laboratory data. Special emphasis is placed on growth and development, nutrition, disorders of fluid and electrolytes, common infections, social issues, and preventative care including immunizations, screening procedures, anticipatory guidance. The student will develop the necessary communication skills to inform, guide and educate patients and parents.

Pediatric ambulatory and in-patient services provide an opportunity to observe and enter into the care of pediatric medical and surgical disorders. The student will learn how to approach the patient and parents and communicate effectively as they take admission histories and perform physical examinations. They will then provide the patient and parents with the necessary information and guidance to understand and support the child through the time of illness. The student will learn age specific skills regarding interviewing pediatric patients and relating to their parents, and will develop the skills necessary to examine children from newborn through adolescence utilizing age appropriate techniques. The adequacy and accuracy of the students' knowledge, communication skills, manual skills and professional behavior will be measured and evaluated by their supervising physicians, residents and preceptors. There will be formative evaluations and discussion of the students' progress throughout the rotation with emphasis on a formal mid-core and end-core assessment.

# PEDIATRICS SPECIFIC OBJECTIVES-

## Medical Knowledge

- Gain knowledge in the core topics of the curriculum.
- Gain supplementary information and data from journals, texts, research, the internet and other resources.
- Demonstrate knowledge regarding the major illnesses and conditions that affect newborns.
- Demonstrate knowledge of health maintenance and preventive pediatrics, including:
    - immunization schedules, newborn screening, lead testing, TB testing, vision and hearing screening.
- Demonstrate knowledge of growth and development with special emphasis on puberty. (Tanner Stages)
- Compare and contrast the feeding and nutritional requirements of each age and stage of childhood.
- Demonstrate knowledge of fluid and electrolyte balance.

## Clinical Skills

- Demonstrate the ability to approach the patient and family in an empathic and focused manner to form a positive and informative relationship.
- Demonstrate the ability to perform an accurate and organized diagnostic interview and record the information precisely and concisely.
- Perform complete physical examinations on newborns, infants, toddlers, children and adolescents.
- Participate in the selection of relevant laboratory and radiological tests.
- Interpret results to support or rule out diagnoses and arrive at a working diagnosis.
- Actively participate in formulating a management plan and participate in carrying out that patient care plan.
- Communicate orally and in writing, the information necessary to educate the patient and family regarding the situations or conditions they are involved with.
- Participate in making decisions regarding management, discharge and follow-up plans.
- Interpret laboratory values according to age-related norms.
- Accompany and observe senior staff in the delivery room for high risk births.
- Communicate with families regarding education and anticipatory guidance during outpatient visits.
- Evaluate common infections and acute illness of children of all ages in the urgent care or emergency setting.
- Evaluate children with serious illness in the inpatient setting.
- Evaluate children with chronic and rare illnesses in the outpatient and sub-specialty centers.
- Prepare management plans that consider the patient's identity, culture and ability to adhere to the recommendations.
- Demonstrate your ability to research topics and apply clinical research to your understanding of patient issues.
- Participate in clinical research when possible, either by participating in an ongoing project or initiating a new line of inquiry.

## Professional Behavior

- Establish rapport with patients and families that demonstrates respect and compassion.

- Appreciate and acknowledge their identity and culture.
- Demonstrate honesty, integrity and respect in dealing with patients, families and colleagues.
- Adhere to the principals of confidentiality, privacy and informed consent.
- Demonstrate that you are a responsible team member and carry out all of your assigned duties in a timely manner.
- Offer assistance when and where it is needed.
- Demonstrate that you are an effective member of the team by fully participating in discussions and contributing to learning endeavors.
- Demonstrate sensitivity to issues related to culture, race, age, gender, religion sexual orientation and disabilities.
- React appropriately to conflicts and ethical dilemmas by working toward solutions.
- Demonstrate a commitment to professionalism and adherence to the principals of bioethics.

# CORE TOPICS

## Week 1 Lecture Topics: General Pediatrics

1. Pediatric age appropriate history
2. Pediatric age appropriate physical exam
3. Patient write-up (problem oriented approach)
4. Begin to formulate a differential diagnosis that relates to the presenting complaint, symptoms and findings on history and physical examination.
5. Formulate a plan for further evaluation (i.e. laboratory, radiology), treatment and management.

**Well Child Care**

1. Immunizations
2. Routine screening tests
3. Anticipatory guidance
4. Nutrition

**Neonatology**

1. The normal newborn
2. Neonatal problems (jaundice, respiratory distress, sepsis, feeding issues)
3. Newborn screening and prophylaxis
4. APGAR scores/Ballard scoring.
5. Fetal Alcohol Syndrome

**Growth and Development**

1. Developmental milestones (when and how to evaluate)
2. Failure to thrive
3. Short stature

**Quiz 1**: Gen. Peds, Well Child care, Neonatology and Growth and Development (End of Week 1)

## Week 2 Lecture Topics: Common Childhood Illnesses and Their Treatments

Ear Nose and Throat (ENT) and pulmonary disorders

1. Upper Respiratory Infection (URI)
2. Pharyngitis
3. Otitis media
4. Sinusitis
5. Cervical adenitis
6. Croup/epiglottitis
7. Bronchiolitis
8. Asthma
9. Foreign body
10. Pneumonia
11. Cystic fibrosis
12. Tuberculosis

**Eyes**

1. Conjunctivitis

2. Ocular trauma
3. Amblyopia
4. Strabismus

**Common Pediatric Orthopedic Problems**

1. Developmental dysplasia of the hip
2. Osgood Schlatter
3. Slipped Capital Femoral Epiphysis
4. Torsions
5. Legg-Calve-Perthes disease
6. Dislocated radial head (nursemaid's elbow)
7. Fractures

**Musculoskeletal System**

1. Osteomyelitis/septic arthritis
2. Muscular dystrophies

**Quiz 2:** Common Peds diseases (End of Week 2)

## Week 3 Lecture Topics: Genetics

1. Down Syndrome, # 21 trisomy
2. #13 trisomy
3. #18 trisomy
4. Turner Syndrome
5. Klinefelter Syndrome

**Collagen Vascular Disorders**

1. Juvenile Rheumatoid Arthritis
2. Systemic Lupus Erythematosus
3. Henoch Schonlein purpura
4. Kawasaki disease
5. Hemolytic Uremic Syndrome

**Endocrine**

1. Diabetes, Diabetic Ketoacidosis (DKA)
2. Thyroid disease
3. Adrenal disease
4. Congenital Adrenal Hyperplasia (CAH)
5. Failure to Thrive
6. Obesity
7. Metabolic Syndrome

**Quiz 3**: Genetics, Collagen Vascular and Endocrine (End of week 3)

## Week 4 Lecture Topics: Cardiac

1. Fetal circulation.
2. Congenital anomalies: Ventricular Septal Defect (VSD), Atrial Septal Defect (ASD),
3. Tetralogy of Fallot, transposition of the great vessels, coarctation of the aorta, patent

4. ductus arteriosus (PDA), pulmonic stenosis (PS). The significance of these defects as isolated findings and as they relate to genetic syndromes.
5. Acquired heart disease: Rheumatic Fever (RF), myocarditis and Hypertension

**Gastrointestinal Disorders (G.I.)**

1. Gastroenteritis
2. Constipation/Hirschsprung's disease
3. Acute abdomen (appendicitis, intussusception, volvulus)
4. Inflammatory bowel disease
5. Gastroesophageal reflux disease (GERD)

**Neurology**

1. Seizures
2. Meningitis
3. Head trauma
4. Cerebral palsy
5. Tumors

**Hematology/Oncology**

1. Anemias/hemoglobinopathies
2. Pediatric malignancies (Acute Lymphatic Leukemia, lymphomas, neuroblastoma, Wilm's tumor)
3. Immune thrombocytopenic purpura (ITP)

**8. Renal and Genitourinary (G.U.)**

1. Urinary tract infections (UTI's)
2. Nephritis/nephrosis
3. Fluid and electrolyte balance
4. Congenital anomalies

**Quiz 4**: Cardiac, GI, Neurology, Hematology/Oncology, Renal and GU (End of week 4)

## Week 5 Lecture Topics: Adolescence

1. Tanner staging
2. Precocious/delayed puberty
3. Stages of adolescent development
4. Sexually transmitted infections
5. Pregnancy/menstrual irregularities
6. Vaginal discharge

**Dermatology**

1. Seborrheic dermatitis
2. Atopic dermatitis
3. Impetigo
4. Fungal Infections
5. Exanthems
6. Neurocutaneous stigmata (neurofibromatosis, etc.)

**Child Maltreatment Syndrome**

1. Physical abuse
2. Sexual abuse and Rape
3. Emotional abuse
4. Neglect
5. Sudden Infant Death Syndrome

**Behavioral Issues**

1. Temper tantrums
2. Discipline issues
3. Sleep disorders
4. Attention Deficit Disorders
5. Hyperactivity issues
6. Learning disabilities
7. Oppositional defiant disorders

**Miscellaneous**

1. Fever without focus
2. Human Immunodeficiency Virus infection (HIV)
3. Acquired Immunodeficiency Syndrome (AIDS)

**Ingestions and Toxidromes**

1. Lead poisoning
2. Salicylate, acetaminophen
3. Iron

**Quiz 5**: Adolescent, Dermatology, Maltreatment, Behavior issues, Miscellaneous and Ingestion and toxidromes (end of Week 5)

## 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 | | | | | | | | |

## PEDIATRIC CORE ROTATION PROCEDURES TO BE OBSERVED BY STUDENT DURING THIS CORE ROTATION:

A. Pediatrics
   1. Bladder Catheterization: Female
   2. Bladder Catheterization: Male (Pediatrics)
   3. Intravenous Catheter Placement (Pediatrics)
   4. Pediatric Basic Airway Management (Pediatrics)
   5. Throat Swab
   6. Neonatal resuscitation
   7. Immunizations: intramuscular injection, subcutaneous injection
   8. Mantoux testing: PPD
   9. Vision and hearing screening tests.
   10. Heel stick of neonate
   11. Circumcision of neonate
   12. Nasopharyngeal swab
   13. Pneumatic-otoscopy
   14. Peak Flow measurement
   15. Administration of inhalation therapy: Metered Dose Inhaler (MDI)/Spacer/Nebulizer
   16. Removal of a Foreign Body from any orifice
   17. Fever management in Children
   18. Milestone Measurements
   19. Counseling parents to a sick child
   20. Taking Pediatric history from the parents
   21. Taking urine specimen sample from a neonate
   22. Neurological Exam on a neonate
   23. Set-up a croup tent
   24. Ventolin nebulizer management

## BASIC PEDIATRIC ROTATION PROCEDURES A STUDENT MUST BE SUPERVISED AND PERFORMED DURING THIS CORE ROTATION:

1. Taking temperature from a neonate and a child
2. Observe and take a detailed history from the parents
3. Observe and take a detailed Physical from a baby
4. Throat swab for specimen and culture
5. Taking B.P. from a neonate or small child

# EVALUATION 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

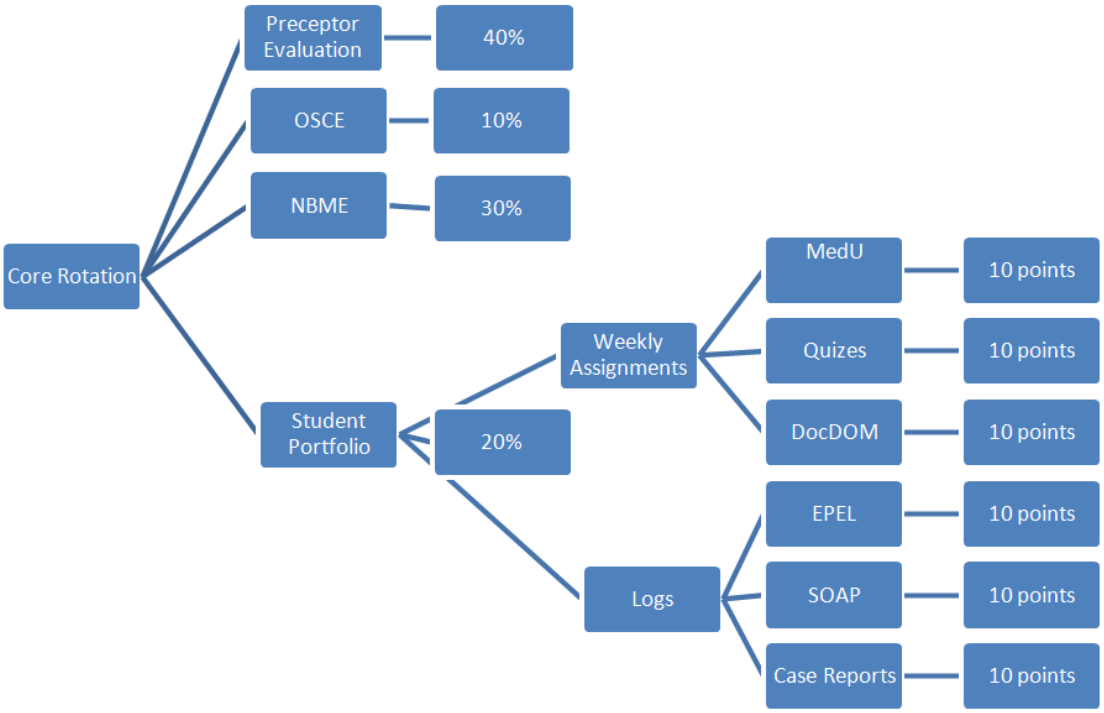
**Grading Policy for the Clerkships**

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. In particular, 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), Oral Examination

Each department has a form for the end-of-clerkship oral exam (appendix J). 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:

**Text books**

1. Current Diagnosis and Treatment Family Medicine, 2nd Edition by South-Paul, Matheny, Lewis
2. Essentials of family medicine, 2nd Edition Sloan, Slat, Curtis

**Recommended Resources:**

1. Case Files Family Medicine, Third Edition (LANGE Case Files) 3rd Edition by Eugene Toy (Author), Donald Briscoe, Bruce Britton
2. Blueprints Family Medicine, 3rd Edition (Blueprints Series) Third Edition by Martin S. Lipsky , Mitchell S. King
3. Family Medicine PreTest Self-Assessment and Review, Third Edition by Doug Knutson
4. AAFP's Board Preparation Questions
5. USPSTF Recommendations

## READING Required

- Pediatrics for Medical Students – Most recent edition, edited by Daniel Bernstein and Steven P. Shelov, Lippincott Williams and Wilkins.

## Comprehensive Textbooks

- Nelson's Textbook of Pediatrics, Latest Edition, Saunders publisher, edited by Behrman, Kliegman, Jenson
- Rudolph 's Textbook of Pediatrics, Latest Edition, McGraw-Hill publisher, edited by Rudolph, Rudolph, Hostetter, Lister, Siegel

# 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: _____