Caguas, Puerto Rico
Clinical Sciences

Department of Internal Medicine
Internal Medicine 326
Student Syllabus

Author: Dr. Luz V. Alicea
Preparation Date: June 2005
Revision Date: June 2011
Revised By: Dr. Luz V. Alicea

Approved by: Curriculum Sub-Committee YIII

Academic Year
2011-2012
San Juan Bautista School of Medicine
Clinical Sciences

Department of Internal Medicine
Internal Medicine 326
Third Year

Credits: 12
Duration: 12 weeks
Clerkship Sites: San Juan Bautista Medical Center/
Ryder Memorial Hospital, Humacao-PR
Schedule: Monday to Friday: 7:30 am to 4:00 p.m.
Night duty (4:00 p.m. -12:00 a.m.) during weekdays,
holidays (8:00 a.m. – 12:00 a.m.)
Previous Requirements: Approved Basic Sciences Program

DEPARTMENT DIRECTOR:
Dr Edgardo Cartagena

ACADEMIC DIRECTOR
Dr Luz Vanessa Alicea

COORDINATOR INFORMATION
Professor: Dr. Luis Ramos San Juan Bautista Medical Center, 6th floor
787-653-0550, ext: 6032 (San Juan Bautista Medical Center)
Dr Alexis Torres, Ryder Memorial Hospital, Humacao
(787) 852-0768 (Hospital Ryder Memorial)
Office hours: Mondays, Wednesdays and Fridays: 1:00 PM– 4:00 PM

FACULTY INFORMATION
Professors: Dr. José H. Martínez (Endocrinology)
Dra. Luz V. Alicea (Internal Medicine)
Dr. Edgardo Cartagena (Pneumology)
Dr. Arnulfo Santana (Pneumology)
Dr. Harry Ruiz (Gastroenterology)
Dr. Moisés Ortiz (Nephrology)
Dr. Nelson Montañez (Hematology-Oncology)
Dr. Eddy Mieses (Cardiology)
Dr. José Ramírez Vázquez (Rheumatology)
Dr. Armando Torres (Infectology)

Internal Medicine Attendings:
Dr. Ernesto García
Dr. Eric Pérez
Dr Jahely Marrero

Ryder Memorial Hospital Faculty
Dr Alexis Torres Torres
Dr Juan Villavicencio
Dr. Idia Velazquez
Dr. Juan C. Ortiz Santiago
Dr. Daniel Rodriguez

San Juan Bautista School of Medicine
Clinical Sciences
Rules and Regulations

See Description in the General Rules File

Course Description

The third year Internal Medicine clerkship is an important rotation in your formation as a doctor. We expect that you obtain the greatest benefit from it. You are expected to learn from each patient, so besides attending the department educational activities and conferences you are expected to learn from each patient. You should be involved in every aspect of your patient's care from taking a history and making a physical exam to observing studies that they undergo (when possible). You are a part of the medical team. We expect that you read about medical issues every day since there is something to be learned from every patient on the service.

You are expected to take the initiative on all aspects of your learning, which includes actively seeking feedback, participating in discussions and spending time with your patient.

The oral presentations provide an opportunity to work on presentations skills before an audience. You are responsible for case presentations as well as theme presentations as assigned by your coordinators. We expect that you come prepared for oral presentations, presenting findings in an organized form and be prepared to answer questions related to the case.

Please dress professionally at all times, be on time, be polite and respectful to your patient's and colleagues at all times. You are expected to do your own work and remember all patient information is confidential.

We expect you obtain the greatest benefit from our department.

OBJECTIVES

A. GENERAL

1. Evaluate patients hospitalized with acute illness
2. Effectively care for patients as part of an inpatient medical team
3. Initiate a management plan for important internal medicine problems
4. Evaluate patients in a medical subspecialty clinic
5. Develop skills that foster life long learning habits and personal reflection
6. Develops an understanding of resources needed by patients and the limitations of the current health care system including the Puerto Rico Health reform
7. Establish rapport with the patient and his family in accordance with the basic ethical standards using proper language, patience, respect and human compassion.

8. Reinforce the self study practice as fundamental method of continuing medical education.

9. Develop skills in oral presentation techniques

B. SPECIFIC

1. Obtain and record a patient's history in a logical, organized and thorough manner.

2. Perform and record a physical examination in a logical, organized and thorough manner.

3. Obtain and understand important supplemental information including CBC, serum chemistries, ECG, chest x-rays and urinalysis.

4. Describe criteria used in evaluating a chest film to be technically adequate. Be able to recognize important radiologic finding in important clinical entities
   - Congestive heart failure
   - Pleural effusion – lateral decubitus x-rays
   - Infectious processes
   - Degenerative joint disease, RA

5. Formulate a problem list and a differential diagnosis based in the history, physical examination, and test data, and use the differential diagnosis to guide initial diagnostic evaluation.

6. Orally present a new patient’s history and physical examination clearly and with appropriate detail.

7. Orally present a follow up of a patient’s case in a focused manner, including diagnostic and therapeutic plans.

8. Work as an effective member of the patient care team, demonstrating reliability, initiative, organization and helpfulness.

9. Learn and practice the interdisciplinary approaches directed to patient health attention, prevention and promotion such as subspecialty evaluation, nutritional evaluation, etc.

10. Establish effective communication so as to identify and respond to each patient’s emotional needs and their personal desires regarding their medical treatment.

11. Write clear progress notes documenting status of diagnostic evaluation and therapeutic plans.
12. Learn and practice common medical procedures in Internal Medicine. Perform venipuncture and arterial puncture. Observe and perform as many procedures as possible

- EKG
- CVP
- Tracheal intubations
- Venous puncture
- Starting IV infusion
- NGT
- ABG
- Catheterization of bladder

13. Access and utilize information resources to help develop an appropriate plan of care to common and uncommon medical problems.

- thromboembolic disease
- arrhythmia recognition
- unstable angina
- anemia
- acid/base disorders
- acute renal failure
- respiratory failure
- acute myocardial infarction
- lower respiratory tract infection
- hyperlipidemia
- chronic obstructive pulmonary disease/bronchial asthma
- peptic ulcer disease
- congestive heart failure/valvular heart disease
- rational use of antibiotics
- joint pain
- acute/chronic liver disease
- overview of oncology
- thyroid disorders
- electrolyte disorder
common geriatric issues
- Diabetes mellitus I and II
- Hypertension
- GI bleeding
- Pancreatitis
- Disorders of coagulation

14. Apply an evidence-based approach to addressing questions that arise in the clinical setting.

15. Self-assess clinical strengths and weaknesses and formulate a plan for improvement.

16. Reflect on patient-related questions as they arise, and develop a system that can be applied to future practice, to search for answers in the medical literature.

17. Reflect on difficult ethical or professional issues and develop constructive ways to handle them.

18. Identify situations specifically related to your position as a physician-in-training and become familiar with some respected opinions regarding this issue.

ACTIVITIES SCHEDULE

A. TIME DISTRIBUTION

The Internal Medicine Third Year Rotation has twelve weeks distributed as follows:
- 60% General Internal Medicine Ward
- 30% Emergency Room (On duty assignments)
- 10% Outpatient

B. DAILY PROGRAM*

<table>
<thead>
<tr>
<th>TIME</th>
<th>ACTIVITY</th>
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</thead>
<tbody>
<tr>
<td>7:30-9:00 am</td>
<td>Morning Report</td>
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<tr>
<td>9:00-12:00 n</td>
<td>Ward Rounds</td>
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<tr>
<td>12:00-1:00 p.m.</td>
<td>Lunch time</td>
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<tr>
<td>1:00-4:00 p.m.</td>
<td>Patient care activities or Interactive lecture</td>
</tr>
<tr>
<td>4:00 pm-12:00 am</td>
<td>Night Duty</td>
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</tbody>
</table>

Thursdays from 1 to 4 PM self study
The schedule may change according to the place.
CORE CURRICULUM
The core curriculum for Third year Medical Students is divided in organ system disease blocks, each of one includes the core topics that should be learned in this formation level. All the topics will be referenced to Harrison’s textbook of Internal Medicine, 17th edition. The following table includes the blocks, corresponding topics, chapters, and page numbers in the textbook. Some of the topics will be presented in conferences. All the topics will be included in the exams.

Subject Content
The following list includes the core topics and pertinent chapter from the reference textbook that, must be covered during the clerkship. The methodology to study these topics may include, but is not limited to conferences, presentations by students, seminars, discussions, Team Based Learning, case based discussions.

- **Coronary Artery Disease**: Chapters 235 to 240
- **Hypertension Cardiovascular Disease**: Chapter 241
- **Congestive Heart Failure**: Chapters 227, 231
- **Arrhythmias**: Chapters 221, 224-226
- **Infectious Endocarditis**: Chapter 118
- **Pneumonia**: Chapter 251
- **Chronic Obstructive Pulmonary Disease and Asthma**: Chapters 248, 254
- **Pulmonary Thromboembolism**: Chapter 256
- **Neoplasms of the Lung**: Chapter 85
- **Peptic Ulcer Disease**: Chapter 287
- **Gastrointestinal Bleeding**: Chapter 42
- **Cirrhosis**: Chapter 302
- **Acute and Chronic Pancreatitis**: Chapter 306, 307
- **Inflammatory Bowel Disease**: Chapters 306, 307
- **Fluid and Electrolyte Disturbances**: Chapter 46
- **Acid-Base Disorders**: Chapter 48
- **Acute Renal Failure**: Chapter 273
- **Chronic Renal Failure**: Chapter 274
- **Anemia**: Chapters 98 - 102
- **Leukemia**: Chapter 104
- **Lymphoma**: Chapter 105
- **Disorders of Coagulation**: Chapters 109 - 112
- **Diabetes Mellitus and Hypoglycemia**: Chapters 338 - 339
- **Thyroid Disorders, Adrenal Disorders**: Chapters 336 - 337
- **Osteoporosis**: Chapter 348
- **Cerebrovascular Disease**: Chapter 364
- **Seizures and Epilepsy**: Chapter 363
- **Alzheimer Disease and Other Dementias**: Chapter 365
- **Parkinson’s Disease**: Chapter 366
- **Meningitis**: Chapter 376
- **Systemic Lupus Erythematosus**: Chapter 313
- **Rheumatoid Arthritis**: Chapter 314
- **Scleroderma**: Chapter 316
- **Vasculitis Syndromes**: Chapter 319
- **Osteoarthritis**: Chapter 326
METHODOLOGY

• Formal Case Presentations:
  - Four cases must be presented and should be worked up to an assigned attending. (Three cases at SJBMC and 1 at Ryder Hospital). This exercise involves the presentation of four actual, non simulated patients to our faculty.
  - Cases must include both oral and written presentation.
  - Presentations will have the following requisites:
    - The student should make an appointment with the assigned proctor at least ten days before the presentation.
    - Patients should have different pathologies
    - Cases must be hand written using the complete (long descriptive form) format of clinical history.
    - Students should present complete history and physical exam, differential diagnosis and, suggested complete diagnostic workup and should be prepared to discuss a summary of all the conditions included in the differential diagnosis.
  - Clinical cases to be presented must be preferentially from patients admitted during call day or in ward. The student should provide the record number and patient’s initials.
  - Cases presented at the morning report will not be accepted for clinical presentation.
  - These presentations are individual and information should be not shared between students. If identical cases are presented by different students, each of them will obtain 0 (zero) in the presentation. In addition, they will be referred to the Associated Dean for Students Affairs for pertinent actions.
  - The deadline for case presentations (4 cases) is before or at the end of the clerkship.
  - The list of assigned cases will be posted at the Internal Medicine Office at each clerkship site.

  • Theme presentations to be evaluated by the student coordinator.
  • Mini-clinical evaluations during attending rounds.
  • The 3rd year students will follow up to 4 patients on ward and no more than 3 new patients in 48 hours.
  • Lectures
  • Daily morning reports discussion – Proctor in charge: Dr. Cartagena and diverse faculty members
  • Daily clinical teaching rounds
  • Journal club: specially designed to motivate the students in the medical research field, to be held during morning report on a weekly basis schedule. (Posted in the Department)
  • Assignment to daily outpatient activities
  • Daily bedside working
  • Library study, research of literature
- Mortality conference: serve as a challenge to the student for the recognition of mistakes committed during the patient’s clinical management and the assessment of the patient’s diagnosis.
- Daily patients interdisciplinary management
- Nightly schedule duties: (from 4:00 p.m. to 12:00 a.m.)
- Grand round conference monthly: presentation of important clinical topics, interesting cases or other update topics.
Evaluation

The Internal Medicine clerkship will be evaluated by both clinical performance evaluations and the written evaluation as follows:

- 60% clinical evaluation

Percent Breakdown for the clinical evaluation:

10% - Attending evaluation during 1\textsuperscript{st} six weeks of rotation
10% - Attending evaluation during 2\textsuperscript{nd} six weeks of rotation
5% - Coordinator evaluation
15% - Case presentations
20% - OSCE Exam

- 40% Shelf exam

A formative test on the OSCE exam will be given prior to the final exam. This activity is not graded, but is compulsory. The student who fails to attend the formative evaluation will not be admitted to take the final OSCE exam. A passing grade of 70% in the OSCE is required to pass this exam. Any student obtaining less than 70% in this exam must take a remedial evaluation. The reported grade of this evaluation will be 70% independent of the obtained grade, the proctor in charge for OSCE activities is Dr. Luz V. Alicea.

For further information about rules and regulations please refer to the clerkship general rules and students manual rules and By-laws.

At the end of the rotation each student is expected to submit the patient encounter log, all presented cases and have all evaluations completed.

All requests for revision of a final grade (including attending evaluation, case presentations and OSCE exam) should be submitted in writing to the department within thirty (30) calendar days following the notification of grades.

A formative written evaluation will be held at midterm of the clerkship. This test will be administered at SJBSOM.
<table>
<thead>
<tr>
<th>Patient type or core condition</th>
<th>Number required to be seen (real or simulated)</th>
<th>Level of student responsibility (P or OB)</th>
<th>Clinical Setting (O, I, E, OR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cardiovascular</strong></td>
<td></td>
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<tr>
<td>Hypertension</td>
<td>1</td>
<td>P</td>
<td>O, I, E</td>
</tr>
<tr>
<td>Hypotension</td>
<td>1</td>
<td>P</td>
<td>I, E</td>
</tr>
<tr>
<td>CHF</td>
<td>1</td>
<td>OB, P</td>
<td>O, I, E</td>
</tr>
<tr>
<td>CAD/Chest pain</td>
<td>1</td>
<td>OB, P</td>
<td>O, I, E</td>
</tr>
<tr>
<td>Valvular Heart Disease</td>
<td>1</td>
<td>OB</td>
<td>O, I, E</td>
</tr>
<tr>
<td>Arrhythmias</td>
<td>1</td>
<td>OB, P</td>
<td>I, E</td>
</tr>
<tr>
<td><strong>Endocrine/metabolic</strong></td>
<td></td>
<td></td>
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<tr>
<td>Diabetes</td>
<td>3</td>
<td>OB, P</td>
<td>O, I, E</td>
</tr>
<tr>
<td>Thyroid Disorders</td>
<td>1</td>
<td>OB, P</td>
<td>O, I, E</td>
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<tr>
<td>DKA</td>
<td>1</td>
<td>OB, P</td>
<td>I, E</td>
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<tr>
<td><strong>GI</strong></td>
<td></td>
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<tr>
<td>GI Bleeding</td>
<td>1</td>
<td>P</td>
<td>I, E</td>
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<tr>
<td>Pancreatitis</td>
<td>1</td>
<td>P</td>
<td>I, E</td>
</tr>
<tr>
<td>Liver Disease</td>
<td>1</td>
<td>OB, P</td>
<td>I, E</td>
</tr>
<tr>
<td>Abdominal pain</td>
<td>1</td>
<td>OB, P</td>
<td>O, I, E</td>
</tr>
<tr>
<td>IBD</td>
<td>1</td>
<td>OB</td>
<td>I</td>
</tr>
<tr>
<td><strong>Hematology/Oncology</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Coagulation Disorders</td>
<td>1</td>
<td>OB</td>
<td>O, I</td>
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<tr>
<td>Anemia</td>
<td>1</td>
<td>OB, P</td>
<td>O, I</td>
</tr>
<tr>
<td>Malignancy</td>
<td>1</td>
<td>OB, P</td>
<td>O, I</td>
</tr>
<tr>
<td><strong>Infectious Disease</strong></td>
<td></td>
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<tr>
<td>BKP</td>
<td>1</td>
<td>P</td>
<td>I</td>
</tr>
<tr>
<td>Acute Infection</td>
<td>1</td>
<td>OB, P</td>
<td>I, E</td>
</tr>
<tr>
<td>Chronic Infection</td>
<td>1</td>
<td>OB, P</td>
<td>O, I</td>
</tr>
<tr>
<td><strong>Neurological</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Seizures</td>
<td>1</td>
<td>OB, P</td>
<td>I, E</td>
</tr>
<tr>
<td>Meningitis</td>
<td>1</td>
<td>OB, P</td>
<td>I, E</td>
</tr>
<tr>
<td><strong>Renal</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Renal Failure</td>
<td>1</td>
<td>OB, P</td>
<td>I, E</td>
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<tr>
<td>Electrolyte abnormality</td>
<td>2</td>
<td>OB, P</td>
<td>I, E</td>
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<tr>
<td>Acid/base disorder</td>
<td>2</td>
<td>OB, P</td>
<td>I, E</td>
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<tr>
<td><strong>Respiratory</strong></td>
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<tr>
<td>COPD/Asthma</td>
<td>1</td>
<td>OB, P</td>
<td>O, I, E</td>
</tr>
<tr>
<td>Respiratory Failure</td>
<td>1</td>
<td>OB, P</td>
<td>I, E</td>
</tr>
<tr>
<td><strong>Rheumatology</strong></td>
<td></td>
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<tr>
<td>OA</td>
<td>1</td>
<td>OB</td>
<td>O, I</td>
</tr>
<tr>
<td>Collagen Vascular diseases</td>
<td>1</td>
<td>OB</td>
<td>O, I, E</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>1</td>
<td>OB</td>
<td>O, I</td>
</tr>
</tbody>
</table>

**OB** = Observation (CR only)

**P** = Participation (Hx/PE and CR)

**I** = Inpatient setting

**E** = emergency room

**CR** = clinical reasoning

**O** = outpatient setting

**O** = outpatient setting
LEARNING RESOURCES

A. Textbook:

Title: Harrison’s Principles of Internal Medicine
Author: Braunwald, E. et. al.
Edition: 18th
Publisher: McGraw-Hill Co.
Publication Date: 2011
ISBN: 007174889X
Library Code: WB 100 H 322 2011
Approximate Cost: $159.00

Considerations:
Harrison’s Principles of Internal Medicine is the most complete Internal Medicine yet available. This book is currently used by most Medical Schools throughout the United States and other International Schools. This book also contains an extensive collection of illustrations, is relatively easy to read.

B. References

1. Other Texts:
      ISBN: 0721679951
      Library Code: WB 100 Ce 388 2007
   
      ISBN: 0781723590
      Library Code: WB 300 M294 2007
   
   c) Internal Medicine Essentials for Clerkship Students.
      Internal Medicine Essentials for Clerkship Students is a collaborative project of the American College of Physicians (ACP) and the Clerkship Directors in Internal Medicine (CDIM), the organization of individuals responsible for teaching internal medicine to medical students. The purpose of Internal Medicine Essentials is to provide medical students with an authoritative educational resource that can be used to augment learning during the third year internal medicine clerkship.
Internal Medicine Essentials is enhanced with additional materials, such as clinical photographs, tables, screening tools and other instruments that are accessible at this Internet site. Access to this compendium of clinical resources is available, free, to the public and is not dependent upon purchasing the textbook.

The content of the textbook and this electronic enhancement is based upon two evidence-based resources provided by the ACP: the Medical Knowledge Self-Assessment Program (MKSAP) and the Physician Information and Education Resource (PIER).

The Physicians' Information and Education Resource (PIER), published by the American College of Physicians, is evidence-based clinical guidance presented electronically in a unique format that provides rapid access to clinical information at the point of care by physicians and other health care providers. In addition to diseases, PIER covers topics in legal medicine and ethics, complementary/alternative medicine, common procedures, and screening and prevention. Other features include extensive links to other high quality material useful to practice and a comprehensive drug resource. PIER is a free resource for American College of Physicians members.

To order Internal Medicine Essentials for Clerkship Students, go to the ACP catalog or call 800-523-1546, ext. 2600. Student members of ACP receive a $10.00 discount and student membership is free.

http://www.acponline.org/essentials/

C. Supplementary Readings:

1. Journals recommended for continued review available at the Library
   a. New England Journal Of Medicine
   b. Journal of The American Medical Association
   c. Annals of Internal Medicine
   d. Archives of Internal Medicine
   e. Journal of American Medical Association (JAMA)
   f. British medical Journal
   g. Lancet
D. Internet Resources:

<table>
<thead>
<tr>
<th>URL</th>
<th>Content</th>
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<tbody>
<tr>
<td><a href="http://www.medsite.com">http://www.medsite.com</a></td>
<td>Complete medical site with medical information, bookstore, on-line search, continuing medical education activities (interactive grand rounds i.e.), medical shopping with discounts.</td>
</tr>
<tr>
<td><a href="http://www.nlm.nih.gov">http://www.nlm.nih.gov</a></td>
<td>National Library of Medicine. The most complete collection of indexed biomedical journals and text. Includes important databases: AIDSLINE, TOXLINE. This site provides a useful tutorial to using the on-line library.</td>
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