



The Florida State University
College of Medicine

BMS 6601

Pathology 201

Fall 2011

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Instructors

Course Director

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Room 2350-K

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jose.diaz@med.fsu.edu (Please contact by email)

Faculty

John Blackmon, M.D.

Office Hours: 8am-6pm (5-6pm preferred) by appointment.

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Facilitators

Small group, laboratory and PBL facilitators are drawn from the FSUCOM faculty and graduate students.

Course Overview

Course Goals



Rudolf Virchow (1821 - 1902)

Virchow was called the “Pope” of Medicine and is considered the father of Pathology and modern medicine. His dictum “all cells come from other cells” altered the scientific views and the direction of medicine at the time. He established the “cellular theory” as the origin of disease and thought disease was produced by disturbances in the structure and function of cells.

The Pathology 201 Course is composed of the Immunology section, the General Pathology Section and the Cardiovascular and Respiratory Organ Systems section. In the Immunology section you learn about the basic mechanisms of host defense against infections and tissue damage, the diseases associated with inappropriate immune responses, such as immunodeficiencies, hypersensitivity reactions and autoimmune diseases. The course continues with the basic pathophysiology of the mechanisms of disease in Medicine (General Pathology). The knowledge gained from the study of these basic mechanisms is subsequently applied to Systemic Pathology which begins toward the end of the fall semester with the Cardiovascular and Respiratory Organ Systems and continues during the spring semester with the Pathology 202 Course and the clerkships in the 3rd and 4th years. Material from systemic pathology will be used to reinforce the general pathology/pathophysiology principles learned during this course. The course will incorporate gross pathologic, microscopic, laboratory, radiologic, and other material to assist you in understanding the disease processes and prepare you for licensing examinations. ***In summary, the knowledge gained from the study of pathology will integrate with other courses to provide you with a foundation for future patient care.***

Learning Objectives

By the end of the course, students will be able to:

1. Define the scope of pathology and the activities, tools, and roles involved in the practice of pathology.
2. Describe the general categories of disease conditions and the general mechanisms of disease.
3. Use accurate vocabulary to describe the immune system and its components.
4. Describe immune cell structure function and interactions.
5. Identify tissues that are part of the immune system.
6. Describe the body’s immune reactions to infections and tissue injury.
7. Demonstrate problem solving skills and diagnostic reasoning to diagnose immunologic diseases.
8. Correlate microbial infection with immunologic findings.
9. Correlate immunologic conditions with pathologic findings.
10. Use appropriate vocabulary to describe disease processes and communicate findings to other health care workers and to patients.
11. Describe the molecular and cellular basis for inflammatory disease states.
12. Describe the molecular, genetic and cellular bases for neoplastic diseases.

13. Explain the pathophysiology of pathologic conditions encountered in clinical practice.
14. Recognize abnormal gross and microscopic findings in the context of the clinical problem.
15. Interpret laboratory findings associated with disease conditions and explain the use of the laboratory for diagnostic purposes, including indications for ordering and proper specimen collection.
16. Describe the appropriate application of autopsy and surgical pathology findings to quality assurance for improvement of clinical practice.
17. Formulate differential diagnoses based upon pathologic findings.
18. Explain the correlation of clinical-pathologic findings with conditions.
19. Interpret radiologic findings that accompany pathologic lesions.
20. Demonstrate problem solving ability when presented with patient scenarios including pathologic findings (small group laboratory discussions).
21. Use evidence-based medicine to obtain information involved in solving case-based problems.
22. Meet compliance standards when ordering laboratory tests.
23. Demonstrate Professionalism in working with colleagues and faculty.
24. Demonstrate an attitude of care and concern for patients and their families affected by pathologic disease states.
25. Treat patients, as represented by laboratory, pathology, and radiologic specimens and records, with respect, dignity, and confidentiality.
26. Describe the fundamental mechanisms of cell injury, repair and adaptation.
27. Describe the interpretation of pathology in the diagnosis of common neonatal, pediatric, congenital and hereditary diseases.
28. Describe the pathogenesis and immunologic aspects of aging and the principles of aging at the clinical, cellular and sub-cellular levels.
29. Describe the pathogenesis, clinical, pathological and laboratory features of hemodynamic, vascular, cardiac and respiratory diseases.
30. Locate appropriate resources (e.g. journal articles) and apply the information to small group cases and other pathologic discussions/study.

Integration with FSU COM Goals and Objectives:

Knowledge

1. Demonstrate knowledge about the application of the scientific bases of health, disease, and medicine to common and high impact medical conditions in contemporary society.
2. Describe the development, structure and function of the healthy human body and each of its major organ systems reviewed on this course (cardiovascular and respiratory) at the macroscopic, microscopic, and molecular levels.
3. Recognize and discuss the implications of altered structure and function (pathology and pathophysiology) of the body and its major organ systems reviewed on this course that is seen in the various diseases and conditions.
4. Identify changes in the structure and function of the human body associated with the aging process and be able to distinguish normal changes associated with aging from those that denote disease
5. Describe the molecular basis of diseases and the way in which they affect the body (pathogenesis).
6. Demonstrate the ability to use basic biobehavioral and clinical science principles to analyze and solve problems related to the diagnosis, treatment, and prevention of disease.
7. Recognize the implications of cultural, social, economic, legal, and historical contexts for patient care.
8. Describe strategies to support lifelong learning via both print and electronic sources to assist in making diagnostic and treatment decisions (e.g., practice guidelines) and to remain current with advances in medical knowledge and practice (e.g., medical information data bases).

Skills

1. Demonstrate the appropriate use of laboratory tests and radiographic studies in making diagnostic and treatment decisions.
2. Demonstrate the ability to evaluate the patient's medical problems and to formulate accurate hypotheses to serve as the basis for making diagnostic and treatment decisions.
3. Demonstrate the ability to acquire new information and data and to critically appraise its validity and applicability to one's professional decisions, including the application of information systems technologies for support of clinical decision-making.

Attitudes/Behaviors

Demonstrate professionalism and high ethical standards in all aspects of medical practice, specifically competence, honesty, integrity, compassion, respect for others, professional responsibility and social responsibility.

Course Format

Lectures/Discussions/Tutorials

Check locations for course activities in your FSUCOM master OUTLOOK class calendar. Materials for these events can be found at the course's Blackboard Web Site (<http://campus.fsu.edu>). Note that due to room scheduling conflicts and other exigencies, the schedule is subject to change and the student is advised to check the electronic OUTLOOK version of the schedule frequently. Changes in the schedule will also be e-mailed to the class. The lectures are designed to cover the course content in an organized fashion, illustrating the concepts and allowing time for you to ask questions.

Small Groups Discussions (SMG)

Check the schedule for times and locations. You will be assigned to one of the learning community team rooms. Assignments for small group sessions will be made largely on the basis of College of Medicine policies and procedures, the number of groups, and room availability. To encourage more active participation among students, one student would be acting as a **team leader** of the SMG for each particular session. Students will rotate to take this role. The student team leader will be appropriately instructed in a **mandatory preview session** and supervised by a **faculty facilitator** (one faculty for each large room rotating through the small rooms).

The last 40 minutes of each small group discussion will be a wrap up session given by faculty in the lecture room. **Attendance for all SMG discussions is mandatory.** SMG sessions are not video recorded, are very interactive and constitute a unique real time experience. While initial learning occurs by attending/reviewing and reading lecture and text book materials, the SMG discussions are the **"application" phase** of the learning process that reinforces and places into clinical context your knowledge and provides a unique opportunity for testing your skills and proficiency. While it is not possible to be professionally competent without adequate knowledge, it is necessary to translate medical knowledge and many additional skills necessary to the practice of medicine with the highest standards.

Our SMG sessions are based on a **"clinical case presentation"** model to simulate an environment closely resembling real clinical situations. **Students will be evaluated by both the student team leader and faculty facilitator for performance**, including professionalism. **Students acting as leaders will also be independently evaluated for performance and professionalism by assigned faculty.** SMG and (when assigned) previews are mandatory, and an excused absence from any of these activities can be granted only through the Office of Student Affairs and the standard request process. Students are responsible for the content of any missed SMG. More than two (2) unexcused absences will result in a grade of "Fail" grade (see attendance policy).

Clinical-Pathologic Correlation (CPC)

The CPC are cases presented by groups of four to five medical students in a 40 minute formal presentation followed by time for questions. The presentation will follow the format below: a

1. Case history, workup tests as per differential diagnosis and final diagnosis
2. Symptoms in a typical case
3. Pathophysiology of the disease
4. Epidemiology (occurrence, routes of transmission, prevalence, etc.)
5. Treatment methods
6. Prognosis

A group of faculty (pathologists, clinicians) will attend the presentations and evaluate the performance. The CPC presentations begin during the last block of this course and continue during the Pathology 202 course. A satisfactory attendance and performance as a student and/or as student leader on the SMG is necessary to pass this course. Also, satisfactory attendance and performance as a presenter of a CPC or as an audience student is necessary to pass the Pathology 202 course in the spring semester. Therefore, CPC attendance and performance during the last block of the Pathology 201 course will be impacting on the Pathology 202 course when most CPC take place.

Competencies

FSUCOM – Competencies -Course Title BMS 6601		
Competency Domains	Competencies Covered in the Course	Methods of Assessment
Patient Care	X	Internal Exams, Quizzes and Case Study Problem Solving in SMG Discussions
Medical Knowledge	X	Internal Exams, Quizzes and NBME customized Exam
Practice-based Learning	X	Case Study Problem Solving in SMG Discussions and Clinicopathological Correlations; evaluated by observation from faculty facilitators, course director and cross-peer student evaluation
Communication Skills	X	Case Study Problem Solving in SMG Discussions and Clinicopathological Correlations; evaluated by observation from faculty facilitators, course director and cross-peer student evaluation
Professionalism	X	Evaluated by observation from faculty facilitators, course director and cross-peer student evaluation during SMG and Clinicopathological Correlations
System-based Practice	X	Evaluated by observation from faculty facilitators and course director when working on the forensic and/or laboratory medicine aspects of the cases presented during SMG

Policies

Americans with Disabilities Act

Candidates for the M.D. degree must be able to fully and promptly perform the essential functions in each of the following categories: Observation, Communication, Motor, Intellectual, and Behavioral/Social. However, it is recognized that degrees of ability vary widely between individuals. Individuals are encouraged to discuss their disabilities with the College of Medicine's [Director of Student Counseling Services](#) and the FSU Student Disability Resource Center to determine whether they might be eligible to receive accommodations needed in order to train and function effectively as a physician. The Florida State University College of Medicine is committed to enabling its students by any reasonable means or accommodations to complete the course of study leading to the medical degree.

[The Office of Student Counseling Services](#)

Medical Science Research Building
G146

Phone: (850) 645-8256 Fax: (850) 645-9452

This syllabus and other class materials are available in alternative format upon request. For more information about services available to FSU students with disabilities, contact the:

Student Disability Resource Center
97 Woodward Avenue, South
Florida State University
Tallahassee, FL 32306-4167

Voice: (850) 644-9566

TDD: (850) 644-8504

sdrc@admin.fsu.edu

<http://www.fsu.edu/~staffair/dean/StudentDisability>

Academic Honor Code

The Florida State University Academic Honor Policy outlines the University's expectations for the integrity of students' academic work, the procedures for resolving alleged violations of those expectations, and the rights and responsibilities of students and faculty members throughout the process. (Florida State University [Academic Honor Policy](#))

Attendance Policy

The College of Medicine has detailed attendance policies as they relate to each cohort and events that conflict with course schedules. See pages 27-29 of [FSUCOM Student Handbook](#) for details of attendance policy, notice of absences and remediation. *In this course (BMS 6602), all examinations and quizzes must be made up within one week of returning to class.*

"It will be the responsibility of the course/education directors to clearly state in their respective course/clerkship syllabi the implications for having an un-excused absence from a scheduled educational or examination activity in a course or clerkship." **For the BMS-6601 (Pathology 201), students with more than 2 such absences in the Fall Term will not receive academic credit for the course, and a grade of "Fail" will be submitted to the Registrar. Students who have an unexcused absence from an examination or a quiz will lose the entire score (points) awarded for that examination or quiz, and the final grade for the course will reflect this loss.**

Required Materials

Required Texts

PATHOLOGIC BASIS OF DISEASE, 8th edition, by Robbins and Cotran.

BASIC IMMUNOLOGY, 3rd Edition, by Abbas and Lichtman.

PLEASE NOTE THAT STUDENTS ARE EXPECTED TO READ THE TEXTBOOKS. POWERPOINT SLIDES WILL NOT SUBSTITUTE FOR THE REQUIRED READINGS.

PowerPoint Lectures

The "Power Point Lectures" section has an electronic version of the PowerPoint lectures for the course. These are designed to supplement and organize the material in the textbook, but not be a complete substitute for it. **Reading the assigned chapters in Robbins is required.** The posted material represents subsets of the slides for a lecture which are posted prior to a lecture. Last moment changes or corrections may occur from time to time, thus the official version is the one available when the lecture begins. **Copyright and other restrictions may prevent some images and other materials from being distributed.**

Suggested Materials

Recommended Text

Robbins and Cotran REVIEW OF PATHOLOGY, 3rd Edition, by Klatt and Kumar

First Aid for the USMLE Step 1 2011, by Tao Le, Vikas Bhushan, Juliana Tolles

Electronic Supplement

WebPath, the Internet Laboratory for Pathology Education

(<http://www.med.fsu.edu/webpath/webpath.htm>) is highly recommended for supplementation of the materials in the textbook, lecture materials, small group discussions and problem based learning (PBL) exercises.

Grading

Assignments

The material for examinations and quizzes will come from lectures, SMG sessions, and the textbook.

The format for examinations will be as follows:

Written examination items: multiple choice questions (single best answer and extended matching) based upon illustrations of gross and microscopic lesions, radiologic images, and charts, graphs, or drawings, from material covered in small group discussions, textbooks, and lectures.

Block Examinations

There will be four (4) integrated block examinations in the fall semester. These examinations will cover material in all the courses for the four to five weeks prior to each examination. The pathology component of each examination may include the following types of questions

Multiple choice written questions without illustrations

Multiple choice written questions with illustrations

The approximate number of questions per block are detailed below. NOTE: last moment minor variations may occur.

Exam	Topic	Questions
Block 1	Basic Immunology and Diseases of the Immune System	60
Block 2	Cell Injury and Inflammation, Neoplasia, Nutritional Diseases and Genetic Diseases	60
Block 3	Pediatric and Gestational Diseases, Environmental Diseases (occupational, trauma), Forensic Pathology, Aging and Thromboembolic Diseases	60
Block 4	Cardiovascular System Diseases and Respiratory System Diseases	60

Quizzes

There will be 8 integrated quizzes, 2 per block on the second and third week of each block. The questions for quizzes will test only the materials (lectures and SMG discussions) covered during the previous week.

Students who have an unexcused absence from an examination or a quiz will lose the entire score awarded for that examination or quiz, and the final grade for the course will reflect this loss.

Small Group Sessions

There will be 9 SMG sessions. In addition, student leaders assigned to each session must attend the preview session to prepare for their role. Satisfactory is defined as being present and punctual to each assigned activity, staying engaged during the session, listening respectfully to others and contributing regularly, exhibiting understanding of the topic by previous review of the assigned materials (lecture power points and reading of text book chapters or any other assigned readings) and demonstrate

analytical thinking ability. In addition, the student acting as a leader would be evaluated by the assigned faculty for compliance with the goals and objectives of the particular SMG discussion he/she is leading, which are discussed during the preview session that precedes each SMG discussion.

Final Grade

The implications for un-excused absences from scheduled mandatory educational activities in the BMS-6601 (Pathology 201) course, such as SMG, including the preceding preview session and/or the CPC sessions are as stated in the attendance policy session, which are re-emphasized next.

Grading Scale

FSU COM has adopted a **pass/fail grading system** used in the curriculum for the first and second years. See [page 31 of Student Handbook](#) for details. **To receive a grade of “pass”, a student must fulfill all of the following requirements:**

An average of $\geq 70\%$ on the 4 block exams

an average of **$\geq 70\%$** on quizzes

satisfactory attendance and participation in all SMG discussions, as determined by the faculty facilitator and course director

attendance and satisfactory participation in the CPC session, as determined by the faculty participants and course director

Students with more than 2 unexcused absences will receive a grade of “Fail.”