



The Florida State University  
College of Medicine

# Pathology 201

**BMS 6601**

**FALL 2012**

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# Instructors

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## ***Course Director***

**Jose Diaz, M.D., Ph.D.**

Room 2350-K

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

[jose.diaz@med.fsu.edu](mailto:jose.diaz@med.fsu.edu) (Please contact by email)

## ***Asst. Course Director***

**John Blackmon, M.D.**

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

[jblackmon@fsu.edu](mailto:jblackmon@fsu.edu) (Please contact by email)

## ***Facilitators***

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

# Course Overview

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## 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. During the fall semester at FSUCOM, Pathology 201 covers the Immunology section in which 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. Pathology 201 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 3<sup>rd</sup> and 4<sup>th</sup> years. Material from systemic pathology will be used to reinforce the general pathology/pathophysiology principles learned during this course. This pathology 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***

### **Demonstrate knowledge, skills or ability on the following:**

1. Definition of Pathology and the activities, tools, and roles involved in the practice of pathology.
2. General categories of disease conditions and the general mechanisms of disease.
3. Vocabulary to describe the immune system and its components.
4. Immune cell structure and function.
5. Immune cellular interactions.
6. Tissues that are part of the immune system.
7. Body's immune reactions to infections and tissue injury.
8. Problem solving and diagnostic reasoning to diagnose immunologic diseases.
9. Correlate microbial infection with immunologic findings.
10. Correlate immunologic conditions with pathologic findings.
11. Vocabulary that allows for description of disease processes and communicating findings to other health care workers and to patients.
12. Molecular and cellular basis for inflammatory disease states.
13. Molecular, genetics and cellular basis for neoplastic diseases.
14. Pathophysiology of pathologic conditions encountered in clinical practice.
15. Recognize abnormal gross and microscopic findings in the context of the clinical problem.
16. Interpretation of laboratory findings associated with disease conditions and ability to use the laboratory for diagnostic purposes, including indications for ordering and proper specimen collection.
17. Appropriate application of autopsy and surgical pathology findings to quality assurance for improvement of clinical practice.
18. Formulate differential diagnoses based upon pathologic findings.
19. Use of clinical-pathologic correlation to understand disease conditions.
20. Radiologic findings that accompany pathologic lesions.
21. Problem solving ability when presented with patient scenarios including pathologic findings (small group laboratory discussions).
22. Skills in evidence-based medicine to obtain information involved in solving case-based problems.
23. Meet compliance standards when ordering laboratory tests.
24. Professionalism in working with colleagues and faculty.
25. Attitude of care and concern for patients and their families affected by pathologic disease states.
26. Treat patients, as represented by laboratory, pathology, and radiologic specimens and records, with respect, dignity, and confidentiality.
27. Fundamental mechanisms of cell injury, repair and adaptation.
28. Common neonatal, pediatric, congenital and common hereditary diseases and their diagnosis.
29. Pathogenesis and immunologic aspects of aging and principles of aging at the clinical, cellular and sub-cellular levels.
30. Pathogenesis, clinical, pathological and laboratory features of hemodynamic, vascular, cardiac and respiratory diseases.
31. 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)

**Attendance to all SMG sessions is mandatory.** Check the schedule for times and locations. You will be assigned to one of the learning community team rooms. To encourage more active participation among students, one student will 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 **preview session** and supervised by a **faculty facilitator** (one faculty for each LC 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. .

Small group sessions are not video recorded, are very interactive and constitute a unique experience that must be taken on real time. 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 and as such, reinforce and place into clinical context your knowledge and provide a unique opportunity for testing your skills and proficiency on some of the competency domains adopted at FSUCOM: 1) patient care, 2) medical knowledge and 3) communication skills. While it is not possible to be professionally competent without adequate knowledge, the knowledge alone does not guarantee competency, which is the practical translation of medical knowledge and many additional skills necessary to practice medicine with the highest standards. In addition, some questions on the quizzes could be inspired on the cases discussed during the small group sessions.

Our SMG sessions are based on a **"clinical case presentation"** model. These sessions test your knowledge and competency in a simulated environment closely resembling real clinical situations. The SMG sessions are a unique opportunity to apply your knowledge while interacting with faculty and other students. **Students will be evaluated by the student team leader and faculty for attendance and performance**, including professionalism. **Students acting as leaders will also be independently evaluated for performance and professionalism by assigned faculty.** Lack of attendance to the SMG discussions or the corresponding preview session for those acting as student leaders on a particular session will be reported by the course coordinator to Student's Affairs. Lack of attendance which is not excused from Student's Affairs will be entered on your personal records. More than two unexcused absences from SMG sessions will result in a "Fail" grade for the course. While attendance to all SMG sessions in the LC is required, attendance to the wrap up sessions in the lecture room is at your discretion. The wrap-up sessions are recorded. You may choose to attend the session in real time or review the on-line version.

### 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 10 minutes for questions and according to the following format:

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 on the last block of Fall semester and continue during the Pathology 202 course. Satisfactory attendance and performance as a presenter of a CPC or as an audience member 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 impact passing Pathology 202 course when most CPCs take place. Students are required to attend 50% of the total CPC sessions in each semester. Typically, each day we conduct CPC sessions two teams of students present two independent 50 minute sessions. Each 50 minute session counts separately toward the 50%attendance requirement. There will be 6 sessions on the fall semester (you must attend 3 or more) and 18 in the spring semester (you must attend 9 or more). Of course, you are obligated to attend the session in which your team is presenting. Attendance to the CPC sessions will be recorded in an attendance sign-in sheet.

## Competencies

FSUCOM – Competencies -Pathology 201 FALL 2012		
Competency Domains	Competencies Covered in the Course	Methods of Assessment
Patient Care	X	Internal Exams, Quizzes and faculty observation of Case Study Problem Solving in SMG discussions
Medical Knowledge	X	Internal Exams, Quizzes
Practice-based Learning		
Communication Skills	X	Observation by faculty facilitators, course director in Case Study Problem Solving in SMG discussions and CPCs; peer student evaluation
Professionalism	X	Observation by faculty facilitators, course director during SMG and peer student evaluation CPCs
System-based Practice		



# Policies

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## ***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](mailto: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 28-29 of [FSUCOM Student Handbook](#) for details of attendance policy, notice of absences and remediation.

**Unexcused absence from a scheduled examination or quiz may result in a score of zero (0 %) being assigned for that assessment. Unexcused absence from any activity for which attendance is required may be considered as an issue of Professionalism. Any unexcused absence may require completion of the Performance Improvement Program (see Grading System, below).**

In addition, *in this course (BMS 6601, Pathology 201)*, **students with more than 2 unexcused absences in the Fall semester will receive a grade of "Fail"**

## Required Materials

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### Required Texts

PATHOLOGIC BASIS OF DISEASE, 8<sup>th</sup> edition, by Robbins and Cotran.

BASIC IMMUNOLOGY, 3<sup>rd</sup> 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 of Blackboard 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

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### 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

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## **Assignments and weights**

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.

### **Block Examinations**

There will be four (4) integrated block examinations in the fall semester. These examinations will cover material in all the Year 2 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

Each multiple choice question answered correctly will be credited with one point. The approximate number of questions and points per block would be as detailed below. NOTE: last moment minor variations may occur.

Exam	Topic	Points
Block 1	Basic Immunology and Diseases of the Immune System	60
Block 2	Cell Injury and Inflammation, Neoplastic, 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 (Attendance Required)**

There will be 4 integrated quizzes, approximately 1 per block. Quizzes will test only the materials (lectures and SMG discussions) covered in the current block. Quizzes are formative and will not contribute to the final exam average.

### **Small Group Sessions**

There will be 9 SMG sessions in the Fall semester. Satisfactory performance 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 demonstrating analytical thinking ability. In addition, the student acting as a leader will 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.

# Grading

FSU COM has adopted a pass/fail grading system which is used in the curriculum for the first and second years (See [page 31](#) of Student Handbook). To achieve a grade of Pass in BMS 6601 (Pathology 201) a student must meet all of the following requirements:

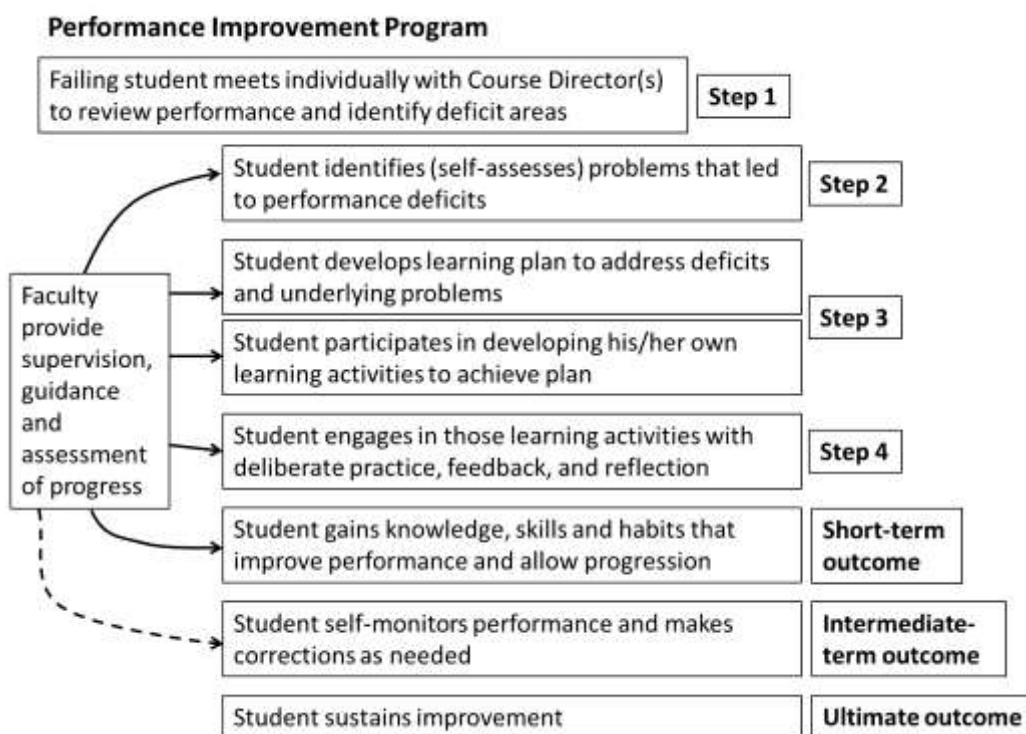
- 1) A final average  $\geq 70\%$  on the total of all examinations and graded quizzes. (Formative quizzes do not contribute to the final average.) An average below 70% will receive a grade of fail which will require remediation or repetition of the course, as determined by decision of the Student Evaluation and Promotion Committee. A student whose performance is below passing during the semester

- $<65\%$  on any one exam

OR

- $<70\%$  on any two exams in the semester

is required to engage in and complete the Performance Improvement Program in consultation with the Course Director. The purpose of this program is to assist the student in developing the skills and habits necessary to succeed in the curriculum as well as to address specific performance deficits.



- 2) Attendance and satisfactory participation in all required sessions, as determined by the Course Director. Attendance is required at all Small Group discussions and 50% (3 or more) of the CPC presentations. Unexcused absence from an activity for which attendance is required (for example, Small Group session) may be considered as an issue of Professionalism and require completion of the Performance Improvement Program.
- 3) Satisfactory completion of all assignments, as determined by the Course Director. Assignments may include preparation and performance as a small group facilitator, and/or preparation and presentation of 1 CPC session.
- 4) Demonstration of the attitudes and behaviors of Medical Professionalism in all aspects of the course. Issues of Professionalism may require completion of the Performance Improvement Program.

Students who receive a grade of fail are required to successfully remediate or repeat the course. This determination will be made by the Student Evaluation and Promotion Committee in consultation with the Course Director.