



The Florida State University
College of Medicine

BMS 6602

Pathology 202

Spring 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

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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 202 course in the spring semester covers the pathophysiology of disease in medicine by organ systems for all the organs (Systemic Pathology), except for the cardiovascular and respiratory systems which were already covered in the Pathology 201 course. Material from the systemic pathology lectures and small group discussions will be used to elaborate further about the general pathology/pathophysiology principles learned during the Pathology 201 course. There is no specific section for Laboratory Medicine in this course. However, all important laboratory tests, the interpretation of their results and the guidelines for its appropriate and cost-effective ordering are covered in the lectures and the small group discussions about each organ system in the Pathology 202 course (also in Doctoring) for each specific disease. The knowledge gained from the study of organ system diseases correlates with other courses during the semester, particularly with Doctoring and will be applied to clerkships in the 3rd and 4th years. This 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 as well as provide you with a foundation for future patient care. ***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. Demonstrate knowledge of the molecular, genetics and cellular basis for the diseases affecting the organ systems covered in this course.
2. Demonstrate knowledge of the pathophysiology of the conditions encountered in clinical practice for all the organ systems covered in this course.
3. Demonstrate the ability to recognize abnormal gross and microscopic findings in the context of the clinical problem for all the organ systems covered in this course.
4. Demonstrate knowledge for the interpretation of laboratory findings associated with the disease conditions for all the organ systems covered in this course and be able to use

- the laboratory for diagnostic purposes, including indications for ordering and proper specimen collection.
5. Demonstrate knowledge of the appropriate application of autopsy and surgical pathology findings to quality assurance for improvement of clinical practice.
 6. Demonstrate the ability to form differential diagnoses based upon pathologic findings.
 7. Demonstrate knowledge of the use of clinical-pathologic correlation to understand disease conditions.
 8. Demonstrate knowledge of the radiologic findings that accompany pathologic lesions affecting the organ systems covered in this course.
 9. Demonstrate problem solving ability when presented with patient scenarios including pathologic findings (small group laboratory discussions and PBLs).
 10. Demonstrate skills in evidence-based medicine to obtain information involved in solving case-based problems (small group laboratory discussions and PBLs).
 11. Develop the ability to meet compliance standards when ordering laboratory tests.
 12. Demonstrate professionalism in working with colleagues and faculty.
 13. Demonstrate an attitude of care and concern for patients and their families affected by pathologic disease states.
 14. Treat patients, as represented by laboratory, pathology, and radiologic specimens and records, with respect, dignity, and confidentiality.
 15. 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

- * Demonstrate knowledge about the application of the scientific bases of health, disease, and medicine to common and high impact medical conditions in contemporary society.
- * 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.
- * 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.
- * 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.
- * Describe the molecular basis of diseases and the way in which they affect the body (pathogenesis).

- * 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.
- * Recognize the implications of cultural, social, economic, legal, and historical contexts for patient care.
- * 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

- * Demonstrate the appropriate use of laboratory tests and radiographic studies in making diagnostic and treatment decisions.
- * 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.
- * 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 and supervised by a **faculty**

facilitator (one faculty for each large room rotating through the small rooms).

The last 30 minutes of each small group discussion will be a wrap up session given by faculty at the lecture room. Although attendance to lectures is not mandatory (lectures are video recorded and are available on line), attendance to all SMG discussions is mandatory for all year 2 students. SMG 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, testing your skills and proficiency on the six competency domains adopted at FSUCOM: 1) patient care, 2) medical knowledge, 3) practice-based learning, 4) communication skills, 5) professionalism and 6) system-based practice. 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 some other additional skills necessary to practice medicine with the highest standards.

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 student team leader and faculty for attendance and performance, including professionalism. Lack of attendance will be reported by the course coordinator to Student’s Affairs. Lack of attendance which is not excused from Student’s Affairs will be penalized with 1 point drop on the final grade for each missed session. Since there are 9 sessions assigned to this course, a potential drop of 9 points will accumulate when missing all sessions without an excuse. This could make almost impossible to obtain a grade A on this course. Therefore, you are urged to attend all sessions unless a qualified excuse is granted by the Student’s Affairs Office and the course director. In addition, some questions on the quizzes could be inspired on the cases discussed during the small group sessions.

Clinical-Pathologic Correlation (CPC)

The CPC are cases presented by groups of four to five medical students in a 40 minutes formal presentation followed by time 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 and clinicians) will attend the presentations and grade it to a maximum of 20 points. Each integrating member of the group who presented the case will obtain the same individual score (group score transposed to each individual).

Competencies

| FSUCOM – Competencies -Pathology 202 BMS 6602 | | |
|--|------------------------------------|---|
| 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 |
| NOTES: | | |

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, found at <http://www.fsu.edu/~dof/honorpolicy.htm>.)

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 BMS 6602, students with more than 2 such absences in the Fall Term will not receive academic credit for the course and a grade of “F” 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. Lack of attendance to SMG discussions or CPCs which is not excused from Student’s Affairs will be penalized with 1 point drop on the final grade for each missed session.

Required Materials

Required Texts

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

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

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 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, from material covered in small group discussions, textbooks, and lectures.

Block Examinations

There will be four integrated 4-hour block examinations in the spring semester. These examinations will cover material in all the courses for the four 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.

There will be a final comprehensive exam which will be NBME customized

| Exam | Topic | Points |
|---------|---|--------|
| Block 5 | Urinary System, Digestive System | 60 |
| Block 6 | Female and Male Reproductive System, Endocrine System and Head and Neck | 60 |
| Block 7 | Hematology, Musculoskeletal System: bone, soft-tissues and muscle | 60 |
| Block 8 | Central and Peripheral Nervous System, Eye and Skin | 60 |

Final Comprehensive Exam

The Final has an unknown number of questions at this time; probably in a range between 40 to 80 points

There will be 8 small group discussion sessions during blocks 5 - 8 and 9 quizzes, 2 to 3 per block on the second and third week of the each block. The questions for the quizzes will test only the materials (lectures and SMG discussions) covered on the prior week. There will be also some SMG/PBL (diabetes, CNS...) during these blocks integrated with other courses from year 2, such as pharmacology, microbiology, doctoring... but these will not contribute to the grade in the Pathology 202 course or the other courses.

Clinical-Pathologic Correlation (CPC)

Each student will take part in one Clinical-Pathologic Correlation (CPC) exercise, which worth a maximum of 20 points. This year there will be 24 CPC groups and sessions, each with five students. Each group will be assigned to present a case and groups will be formed randomly. The structure of the case presentation is presented in the outline of the course section at the end of the syllabus. Attendance to the CPC sessions is mandatory for the whole class and not just the presenters. Since the CPCs begun during the Pathology 201 course you are already familiar with this activity. Those who presented their CPCs during the Fall semester will receive their CPC credit points in the Spring semester.

Final Grade

Thus, the final grade in Pathology 202 (BMS-6602) will be determined as follows:

Approximately 240 Multiple choice exam questions

Approximately 72 quiz questions

An unknown number of customized MBNE exam questions; probably between 40 to 80

20 potential total points from Clinical-Pathologic Correlation Exercise

“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 BMS 6602, students with more than 2 such absences in the Spring Term will not receive academic credit for the course and a grade of “F” 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. Lack of attendance to SMG discussions or CPCs which is not excused from Student’s Affairs will be penalized with 1 point drop on the final grade for each missed session.

Grading Scale

Grading for the course is based upon a numeric score calculated as a percentage achieved from all possible points, as follows:

| Grade | Percentage |
|-------|-----------------------|
| A | > 90.0 % correct |
| B | 87.0 – 89.9 % correct |
| B+ | 80.0 – 86.9 % correct |
| C+ | 77.0 – 79.9 % correct |
| C | 70.0 – 76.9 % correct |
| D | 65.0 – 69.9 % correct |
| F | < 64.9 % correct |