

Course Syllabus

WELCOME TO THE PATHOLOGY COURSE

I apologize for the length of this introductory document. However, it includes the answers to most of the questions raised (often countless times) during previous years. When you have questions, please refer to this document. There's a good chance you will find the answer. If not... next year it'll be even longer! Content is as follows:

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CONTACT INFORMATION



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Course Coordinator

Our Course Coordinator is Ashley Edwards (314-454-8462, aedwards@path.wustl.edu). Although I am always available to you, it would be helpful if you could initially direct administrative questions to Ashley, most reliably via email.

Section and Theme Leaders

Each 2nd year block contains one or more sections, each with its own Section Leader. The Course also includes two themes with content that spans two or more blocks.

As discussed elsewhere, the organization of sections and themes has changed since last year, primarily to provide more time for end of the year board preparation. This included the

conversion of the short Endocrine Pathology section to a "theme" and the move of the OB-GYN/Testicular Pathology from Block 6 to Block 3.

The Section or Theme Leaders are responsible for the organization and content of the individual sections or themes, respectively. I'm always available to answer questions. However, if your question pertains to the content of the section or theme, or a specific lecture, please consider first contacting the lecturer or corresponding Leader.

BLOCK	SECTION	LEADER	E-MAIL
Block 1	General Pathology	Dr. Erika Crouch	crouche@msnotes.wustl.edu
Block 2	Pulmonary Pathology	Dr. Erika Crouch	
	Cardiac Pathology	Dr. Erika Crouch	
	Renal & Urinary Tract Pathology	Dr. Erika Crouch	
Block 3	OB-GYN Pathology	Dr. Ian Hagemann	hagemani@wustl.edu
	GI Pathology	Dr. ILKe Nalbantoglu	inalbantoglu@wustl.edu
	Dermatopathology	Dr. Erika Crouch	
	Bone & Soft Tissue Pathology	Dr. Erika Crouch	
Block 6	Hematopathology	Dr. John Frater	jfrater@wustl.edu
B 1-3,5-6	Laboratory Medicine Theme	Dr. Mitchell Scott	msscott@wustl.edu
B 1-2	Endocrine Pathology Theme	Dr. Erika Crouch	

COURSE PHILOSOPHY AND GOALS

Philosophy: Students enter Medical School with a wide variety of educational needs and learning styles. Accordingly, we offer a variety of learning resources with the hope that we can better meet their academic needs. The combination of lectures, handout materials, labs, large group sessions, optional texts, optional computing resources, and objective-based examinations should provide each student with a solid foundation in pathology in anticipation of their future clinical training and medical practice.

Overarching Goal: The goal of the Pathology Course is to provide students with essential medical knowledge and a broad understanding of human disease. The Course emphasizes "the language of disease" as a necessary foundation for self-education and lifelong learning.

Specific learning (session) objectives have been developed by all lecturers, and are included at the beginning of each lecture handout for each section of the Course. These session objectives build on the following course learning objectives:

COURSE OBJECTIVES

By the end of this course students should be able to:

- Define the keywords and phrases emphasized in the lectures, course materials, and glossary.
- Describe our current understanding of the pathogenesis and epidemiology of the common or important diseases discussed in lecture.
- Describe and recognize the major cell and tissue alterations associated with these diseases and how they contribute to organ dysfunction or clinical signs and symptoms.
- Describe how pathological analysis is used to recognize, classify, grade and stage the major types of malignancy.
- Describe how pathological analysis contributes to disease surveillance and the evaluation of therapeutic interventions.

Each course objective has been mapped to the WUSM Medical student competency-based learning objectives. These program level objectives can be found in the [Bulletin of the School of Medicine](#).

COURSE MATERIALS

All schedules, materials, important links, and documents can be accessed via the Canvas. *Financial disclosure:* Unless otherwise stated, faculty in the Department of Pathology and Immunology have no conflicts of interest relevant to the content of this Course.

Written Materials and PowerPoint Presentations

Handouts for each section are provided in a course book in PDF format and are available under Reference. The original Word files are linked from the Session Overview page for the corresponding lecture. The style of the handout / course book material is left to the discretion of the lecturer; however, most materials have a narrative structure.

PowerPoint presentations are posted as soon as the final version becomes available. Links to any updated versions of a file are identified by the date and time of upload.

Pathology Labs and Case Studies

The pathology labs and large group sessions are designed to supplement the lecture materials and are not intended to introduce new content. Fixed gross specimens are demonstrated in the labs. Although not required, this is a unique opportunity to "see and feel" the diseases discussed in the Course.

Room assignments for gross labs are provided on the session overview for the lab. We are currently using rooms 402, 403, and 404 in the LTC. Although the assignments are not strictly

enforced, it is to your advantage to avoid crowding into one or two rooms. For most labs, the faculty will rotate, while students remain in their assigned room. This helps insure that all students are exposed to the same content.

Large group interactive sessions, which usually emphasize short case studies, are held in the lecture hall and presented and analyzed as group problem-solving exercises.

Optional Texts and Companion Resources

Are there any required texts? There are NO required texts. However, the first eight chapters of the *Pathologic Basis of Disease* by Robbins, Cotran, and Kumar (9th edition, W.B. Saunders, 2014) are *highly recommended* as complementary reading for the General Pathology Section of the course. The first section of Chapter 6 on "General Features of the Immune System," provides an excellent review of immunologic mechanisms discussed in the first year. Some lecturers in later sections of the Course may also identify or recommend sections of this text in their handouts; however, this is always optional. Although the text is dense, it is quite readable, very up-to-date, and the color photographs are generally excellent. Copies are available in the library, both in book and electronic form. The Student Consult Edition comes with access to a searchable online version with downloadable images.

Many students find *Basic Pathology* by Kumar, Robbins, and Cotran (9th edition, W.B. Saunders, 2013) preferable to *Pathologic Basis of Disease*. It overlaps with *Robbins*, but is much less dense. Feedback from students suggests that it is a good review for the National Boards. However, it is too abbreviated to recommend as a general shelf reference. The *Pocket Companion to Robbins Pathologic Basis of Disease* provides a reasonable outline of many of the most important points in *Pathologic Basis of Disease*.

Can you recommend an atlas of gross or microscopic pathology? The Robbins and Cotran series of texts has an accompanying atlas entitled *Atlas of Pathology* by Klatt (third edition, W. B. Saunders, 2014). This atlas, as well other Robbins texts, can be accessed in an electronic form from Becker Library.

Computer Assisted Resources

The Course *Glossaries* on Canvas were student generated, but subsequently vetted and maintained by faculty. It is not comprehensive, but includes most of the keywords identified in the written materials.

Slide-Atlas virtual microscopy slides are provided for each Block and the Endocrine Pathology Theme. All the slides for this course have narrative guides and annotations that identify key histologic landmarks and/or pathological abnormalities. Slides are grouped to align with the corresponding sessions and have descriptive file names. These are available under Reference, but are also linked from the corresponding section or theme on the home page.

PathDeck corresponds to a set of student-generated, faculty vetted Anki decks for each section of the Course. The decks are distributed via Box. Because many cards contain copy protected

information it is essential that they not be shared on the Anki web site or with students at other Medical Schools.

Optional Autopsy Conference

The autopsy is one of the best opportunities for physicians to correlate clinical and pathologic findings, and provides a unique opportunity to assess the accuracy of premortem diagnoses and the response to therapy. *Students are invited to attend the weekly Autopsy Gross Review Conference between September and June of each academic year. With few exceptions, the conference is held from 8:00-9:00 a.m. every Thursday in the Autopsy Conference Room.*

Residents will present and discuss the cases under the supervision of faculty. The conference is informal (white coats are hard to find)! On very rare occasions the conference will be canceled at the last minute because of a lack of appropriate cases. We apologize in advance for the resulting inconvenience.

How do I find the Conference Room? The Autopsy Suite (Morgue) is on the first floor of the West Building, just off the main east-west corridor of Barnes-Jewish Hospital, South, across from the LTC. If entering Barnes from McDonnell or the from the Euclid entrance, you'll find the door to the West Building at the bottom of the ramp that connects the McMillan Building with Barnes Hospital. The Autopsy Suite is the first door on the left (a short walk down the hall). Please press the buzzer on the wall if the door happens to be locked. The door to the Conference Room is at the end of the hallway, immediately opposite the entrance.

Can I attend an autopsy? Students are also invited to attend autopsies as they are being performed. Just telephone the Autopsy Suite (362-7287) and talk with one of the staff to find out when an autopsy is scheduled. Saturday morning is often a convenient time.

POLICIES

Attendance - It is your life

Exams

A total of four Pathology examinations will be given. We are continuing in our efforts to make the exams objective-based. Thus, the objectives, handouts, and transcripts will likely provide the most reliable indication of the testable knowledge base.

When will the exams be administered?

Block 1	September 6	9-12 PM	Connor
Block 2	October 31	9-12 PM	Connor

Block 3	December 12	9-12 PM	Connor
Block 6	May 8	9-12 PM	Connor

The exams will only test materials presented in the Pathology Course, not any content presented in lectures/small groups in Pathophysiology. Detailed instructions are linked from the home page in Canvas as an event on the scheduled date of the exam. They are also provided in a pre-exam email.

Neuropathology (Block 4) is presented as a part of "Diseases of the Nervous System" and will be tested independently as part of that course. There are no formal exams for the themes, but there will be required non-graded assessments posted on Canvas.

What is the exam format? Each exam consists of single answer multiple choice questions in a standard Board-style format. Many questions will be introduced with classical clinical scenarios. *All four exams* include a "practical" portion consisting of questions that require interpretation of images of gross and/or microscopic specimens. Some questions will require integration across objectives. In general, questions are requested from faculty at a rate of 4 written and 2 practical questions per lecture hour.

Should I use copies of old exams? I believe that exams should serve as retrospective learning exercises that help you to identify areas for further study. For this reason, questions and answers are freely distributed after each exam to facilitate review. In my opinion, reliance on banked old exams for exam preparation is inconsistent with "life-long learning" and I recommend that you avoid using them. If you want to fully test your knowledge, don't memorize old exams.

Nevertheless, they are available. Sample questions are posted before the first exam.

What if I have a conflict for the scheduled examination time or need accommodations? All absences must first be approved by the Dean of Student Affairs. All other accommodations should be arranged well in advance of the first exam.

Scoring of Exams

How will I be informed of the results? Every effort will be made to expeditiously report the results of exams, usually by the end of exam week. Please do not ask for an "early notification" of your grade. It is our hope to report all grades via Canvas. Exam booklets will be returned to your mailbox, but Scantron sheets will remain on file.

As soon as grading is complete and all students have taken the exam, an annotated exam with answers will be posted under *References*. This will remain available until the end of the subsequent block.

What should I do if I have concerns about the validity or fairness of a question? Concerns about the wording of specific questions must be entered in the comments sections on the answer sheet. I work hard to make the exam as fair as I can, consider any comments attached to the

exam or made by students during the exam, and attempt to discard ambiguous or poorly written questions prior to grading. *I do not change scores after the grading has begun except to correct an error in tabulating your score or grade.* Such errors should be brought to our attention as soon as possible, *but always before the next examination.* *Students are responsible for accurately transferring all answers to the Scantron sheet with a #2 pencil and insuring that there are no extraneous marks.*

There are sometimes conflicting theories regarding disease pathogenesis and differences of opinion regarding optimal approaches to diagnosis and therapy. All questions should, therefore, be answered in a way that is consistent with material presented by our lecturers. The exams are organized in such a way that the source of the question should be obvious. Demonstration of alternative possible answers based on lecture notes from other courses, past exams, or non-assigned reading materials will not be a basis for allowing alternative responses. Likewise, scoring will not be changed on the basis of perceived ambiguities in the wording of objectives; the objectives - like the Course - are constantly evolving and should only be used as a guide.

Course Grade

The primary goal of grading is to make sure that each student completing the Course knows the key terminology and core knowledge base of general and organ system pathology. There will be a single Pass/Fail grade for the Course based on 4 Pass/Fail exams and satisfactory completion of all required assignments. You must correctly answer **70% or more** of the questions to pass each an exam, and students will not be permitted to remediate more than two of the exams. The cut-off for passing is absolute, regardless of personal circumstances. All failing scores, and passing scores below 80%, will be reported to Associate Dean of Student Affairs to help insure that struggling students receive the assistance that they need.

PROFESSIONAL EXPECTATIONS

Course and Lecture Evaluations

Your feedback is critical to guide future improvements to the course, both in terms of the overall structure of the course and the presentation of specific lectures. An evaluation sheet is provided at the back of each syllabus to help you recall your impressions and concerns regarding specific lectures. Comments regarding possible areas of redundancy, apparent contradictions, and possible deficiencies in the content or organization of handouts and lectures are particularly welcome. Please make your comments regarding the performance of specific lecturers as constructive as possible. All our faculty want to teach, despite the paucity of tangible rewards.

Professionalism and the Pathology Course

Each Coursemaster has been asked to define professional behavior in relation to their Course. In my view, professionalism will be reflected by:

- an acceptance of fellow students and faculty as professional colleagues deserving courtesy and respect;
- a focus on learning rather than meeting minimum Course requirements or simply studying for the examinations;
- an acceptance of uncertainty, ambiguity, and the inevitability of change in relation to medical knowledge and practice;
- a respect for alternative views or differing interpretations of scientific or clinical information, and a respect for different teaching styles and practices;
- the ability to assume personal responsibility for fulfilling course requirements;
- a willingness to help the faculty identify errors or deficiencies in course materials, and to provide specific, thoughtful, and constructive feedback relating to lectures and other course content on the formal Course Evaluations.

The professional expectations for this course are in line with those of the Washington University School of Medicine. Please refer to the policies posted in the [Bulletin of the School of Medicine](#).

Mistreatment Policy

All faculty and students deserve to be treated with respect and the WUSM Mistreatment Policy will be strictly enforced. Any concerns should be communicated to the Coursemaster, the Associate Dean for Student Affairs, and/or the Associate Dean for Medical Student Education. The Guidelines for Professional Conduct in Teacher/Learner Relationships and the Policy against Medical Student Mistreatment can also be accessed in the [Bulletin](#).

COURSE UPDATES BASED ON STUDENT FEEDBACK

- The Pathology Course was reorganized and compressed to provide additional time for USMLE Step 1 preparation.
- We completed the move of virtual slides from Bacus (Olympus) to the Slide-Atlas platform. Slides were annotated and an updated guide was created.
- We have reorganized the Lab Medicine Theme to eliminate certain redundancies and better align with content in Pathophysiology.

CONCLUDING NOTES

You are now one of us, a medical colleague. It is time to take control of your learning and embrace the process of lifelong education that will make you the best possible physician, physician-scientist or teacher.