

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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Course Philosophy and Goals

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Course Updates Based on Student Feedback

Concluding Notes

CONTACT INFORMATION



Coursemaster: Erika Crouch, M.D., Ph.D.

Office: BJC Institute of Health

Email: crouch@wustl.edu

Phone: (314) 454-8462

Course Coordinator

Our Course Coordinator is Ashley Edwards (314-454-8462, edwards.a@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 one theme with content that spans more than one block.

As discussed elsewhere, the organization of sections changed last year, primarily to provide more time for end of the year board preparation. This included the redistribution of Endocrine Pathology sessions and the move of 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. If you have a question that specifically relates the content of a section, theme, or specific lecture; please consider first contacting the lecturer or corresponding leader.

BLOCK	SECTION	LEADER	E-MAIL
Block 1	General Pathology	Dr. Erika Crouch	crouch@wustl.edu
	Endocrine Pathology	Dr. Erika Crouch	
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. Ilana Rosman	irosman@wustl.edu
	Bone & Soft Tissue Pathology	Dr. John Chrisinger	jschrisi@wustl.edu
Block 6	Hematopathology	Dr. John Frater	jfrater@wustl.edu
B 1-3,5-6	Laboratory Medicine Theme	Dr. Mitchell Scott	mscott@wustl.edu

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, 2015) 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. Although the text is dense, it is quite readable, still reasonably up-to-date, and the color photographs are generally excellent.

Many students find *Basic Pathology* by Kumar, Robbins, and Cotran to be preferable to *Pathologic Basis of Disease*. It overlaps with *Robbins*, but is more focused and more condensed. 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 new 10th edition (W.B. Saunders, 2018) is now available. 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*.

Copies are available in Becker Library, both in book and electronic form (see Pathology Links under Reference).

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, 2015). The images are more useful than found on most web sites, as they have been carefully curated and accurately identified. The Robbins atlas can be accessed in an electronic form from Becker Library (see Pathology Links under Reference).

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. I highly recommend it, particularly for General Pathology.

Slide-Atlas virtual microscopy slides are provided for each section. 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 as usual. 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. Student caretakers for the collection have recently added content from *First Aid* to the notes field of various cards; this is not vetted but should be recognizable.

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. Residents will present and discuss the cases under the supervision of faculty. The conference is informal (white coats are hard to find)!

With few exceptions, the conference is held from 8:00-9:00 a.m. every Thursday in the Autopsy Conference Room. Intermittently the conference will be canceled at the last minute because of a scheduling conflict or the lack of appropriate cases. To confirm that a conference is scheduled, please call the Autopsy Suite (362-7287). We apologize in advance for any inconveniences.

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 11	9-12 PM	Connor
Block 2	November 6	9-12 PM	Connor
Block 3	December 18	9-12 PM	Connor
Block 6	May 2	9-12 PM	Connor

The exams will only test materials presented in the Pathology Course, not any content presented 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 Lab Medicine theme, 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 classic 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 approximately 4 written and 2 practical questions per lecture hour.

Should I use copies of old exams? In my opinion, extensive use of 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. 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? All grades are reported via Canvas. 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.

One change for last year is that exam booklets will no longer be returned to student mailboxes. However, they will be retained in our office until completion of the academic year. The exam booklet, Scantron sheet, and a copy of the exam with answers can be reviewed by contacting the Course Coordinator.

Consistent with the practice in most other courses, we are no longer posting copies of annotated exams with answers on Canvas.

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. Validity of questions is also assessed by examining item statistics prior to uploading of the exam score. *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 ideas or 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 the lecturer. 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 2 of the 4 exams. The cut-off for passing is absolute, regardless of personal circumstances. Remediation is individualized and may consist of a makeup exam and/or a written study exercise; after satisfying the required remediation, the score is adjusted to the minimum passing score.

All failing scores and all passing scores below 80% will be reported to Associate Dean of Student Affairs for no other reason than to help insure that struggling students receive the assistance that they need.

All exams and all required quizzes or assignments must be completed to receive a final grade for the Course. In addition, failure to complete required quizzes or other assignments by the closing date is considered a professionalism concern and repeated failures will result in filing of a concern form. If by some chance you do miss an assignment, it is your responsibility to contact the course coordinator or course director as soon as possible; failure to do so could also result in our filing a concern form.

PROFESSIONAL EXPECTATIONS

Course and Lecture Evaluations

Your carefully considered 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

- Last year the Block 3 Endocrine Pathology section was converted to a multi-block theme to accommodate required scheduling changes. Although most sessions were moved to Block 1, the session on diabetes mellitus was moved to Block 2. Based on student feedback, all endocrine pathology sessions are now part of a consolidated Endocrine Pathology section that generally parallels the Endocrine Pathophysiology Course.
- Support for *Piazza for Pathology* was discontinued given a marked decline in utilization by students during the 2016-2017 academic year. Email is once again the preferred path of communication.
- As indicated above, we will no longer be posting copies of annotated exams with answers on Canvas.

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.