

**Fall Semester**

**M1 Musculoskeletal System**

**MED 47719**

**M-F (9:00 AM-12:00 PM)**

**August 7 – September 1, 2023**

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# I. FACULTY CONTACT INFORMATION

COURSE DIRECTOR: **Elliot Goodman MD**

***Email:*** egoodman@med.cuny.edu

***Office hours*: Online Tuesday 12noon to 3pm (sign up required)**

COURSE CO-DIRECTOR: **Danielle Pritchett**

***Email:*** DPritchett@med.cuny.edu

MODULE LEADER: **Liliya Gandrabur, MD**

***Email:*** liliya.gandrabur@gmail.com

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

PBL and TBL DIRECTOR: **Emine Ercikan Abali, PhD**

eabali@med.cuny.edu

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

FACULTY Emine Ercikan Abali, PhD

eabali@med.cuny.edu

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Anand Bhatia, MD

[abhatia1@med.cuny.edu](mailto:abhatia1@med.cuny.edu)

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Dahdouh Michelle, MD

[mdahdouh@sbhny.org](mailto:mdahdouh@sbhny.org)

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Liliya Gandrabur, MD

liliya.gandrabur@gmail.com

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Paul Gottlieb

[pgottl@med.cuny.edu](mailto:pgottl@med.cuny.edu)

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Charles Gropper, MD

cgropper@ccny.cuny.edu

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Kiran Grace, MD

kmatthews@med.cuny.edu

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Helen Kurian

[hkurian@med.cuny.edu](mailto:hkurian@med.cuny.edu)

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Maria D Lima

mlima@med.cuny.edu

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Linda Spatz, PhD

lspatz@med.cuny.edu

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Rosemary Wieczorek, MD

RWieczorek@med.cuny.edu

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

Rob Zachow, PhD

[zachowrj@rwjms.rutgers.edu](mailto:zachowrj@rwjms.rutgers.edu)

*Office hours*: **Online** **Tuesday 12noon to 3pm (sign up required)**

COURSE COORDINATOR: **Julianna Diaz**

***Phone:*** 212-000-000

***Email***: jdiaz3@med.cuny.edu

# II. COURSE MEETING TIMES

* Musculoskeletal System will meet Monday through Friday from 8:30 AM to 12:00 PM. A weekly self-study day will allow students to prepare for the in-class sessions. All the in-class sessions are mandatory.
* Labs: There is one mandatory anatomy lab. You are expected to attend the lab as scheduled. There will be an optional afternoon session in which the lab will be available for self-study. An expert will always be present if you have any questions.
* Case-based learning sessions are composed of 3 methods:

1. ScholarRx Integrative Scientific & Clinical Case Discussions =RxISCC): You will have several RxISCC sessions in a week. You are expected to come prepared to these sessions by learning the required readings and videos from ScholarRx.
2. Team-based learning (TBL): There are 2 TBL sessions in MSK. Preparation to the TBLs are similar to the RxISCC sessions.
3. Problem-based learning: In each Organ systems module, there are either 1 or 2 PBLs. They always meet on Mondays and Wednesdays, but not each Monday and Wednesday. Each PBL has 3 sessions: Session one: 1 hr. (11:00 AM-12:00 PM), Session 2: 2 hrs. (10:00 AM-12:00 PM), and Session 3: 2 hrs. (10:00 AM-12:00 PM).

# III. **COURSE COMMUNICATIONS THROUGH EMAIL AND LEO**

**Email:** You will receive emails about the course every week through LEO. These emails are not sent to individual addresses. Please check your email regularly. If you have questions about the course content, post your questions on the Discussion Board on LEO. If you need to talk with the teaching faculty or me (the course director), feel free to email them or me. However, you should not expect immediate responses. Please allow 24 hours, not including weekends, for a reply before you send a reminder email. In your email, please identify yourself and the course you are taking since many teaching faculty teach several courses at the same time. **Emails without names and lab sections will not receive a response.**

**LEO:** LEO will provide you with an online forum for discussions related to course topics. All of your assigned readings are posted on LEO.

# IV. TEXTBOOK AND READINGS

**REQUIRED READINGS:**

[**ScholarRx**](https://urldefense.proofpoint.com/v2/url?u=https-3A__scholarrx.com_&d=DwMFAw&c=4NmamNZG3KTnUCoC6InoLJ6KV1tbVKrkZXHRwtIMGmo&r=b5LQgJcNE3eaPNgAxqaeLRmw3jgp_i1hXdsFm037las&m=AagOCG4lT6mt8VsPaIZlHd-w_BkoVo9CXIMelzp-7CM&s=S38DStTi7p6XqLscRrnqSLTYyRbnsyjdZwJ7qn-T_-c&e=)

**Other available resources: (Please note if additional reading is recommended in these resources the faculty with place links in the Scholar RX brick)**

**Histology**

1. Junqueira's Basic Histology (Text and Atlas) (Lange series), 16th edition, Anthony L. Mescher, McGraw Hill Education, 2021. Available at CCNY Medical Library at Access Medicine.
2. Wheater's Functional Histology: A Text and Colour Atlas, 6th edition, Barbara Yound, Geraldine O'Dowd, and Phillip Woodford, Elsevier Churchill Livingstone, 2014. Available at CCNY Medical Library at ClinicalKey**.**

**Physiology**

1. Guyton and Hall Textbook of Medical Physiology, 14th edition, John E. Hall, Elsevier, 2016 or 2021. Available at CCNY Medical Library at ClinicalKey.

**Pharmacology**

1. Basic and Clinical Pharmacology (Lange series), 15th edition, Bertram Katzung and Todd W. Vanderah, McGraw-Hill Education, 2021. Available at CCNY Medical Library atAccess Medicine.
2. Principles of Pharmacology: The Pathophysiologic Basis of Drug Therapy, 4th edition, David E. Golan, Ehrin J. Armstrong, and April W. Armstrong, 2016, Wolters Kluwer. Available at LWW Health Library.

**Pathology**

1. Robbins & Kumar  Basic Pathology, 11th edition, Vinay Kumar, Abul K. Abbas, Jon C. Aster, Elsevier, 2023. Available at CCNY Medical Library at ClinicalKey.

2. Robbins & Cotran Pathologic Basis of Disease, 10th edition, Vinay Kumar, Abul K. Abbas, Jon C. Aster, Andrea Deyrup and Abhijit Das​, Saunders, 2021. Available at CCNY Medical Library at ClinicalKey.

**Immunology**

1. Basic Immunology; Functions and Disorders of the Immune System, 7th edition, Abul K. Abbas, Andrew H. Lichtman, & Shiv Pillai, Elsevier, 2023. Available at CCNY Medical Library at ClinicalKey.

**Microbiology**

1. Sherris Medical Microbiology, 7th edition, Kenneth J. Ryan, Nafees Ahmad, J. Andreq Alspaugh, W. Lawrence Drew, Michael Lagunoff, Paul Pottinger, L. Barth Reller, Megan E. Reller, Charles R. Sterling, and Scott Weissman. McGraw-Hill, 2018. Available at CCNY Medical Library at Access Medicine.

# V. COURSE DESCRIPTION AND GOALS

The goal of the musculoskeletal system is to provide a basic introduction to the field of skin & subcutaneous tissue and the musculoskeletal system.

Disorders of the musculoskeletal system and skin are the single most common cause of physical disability in older persons, accounting for one-third of physical disability at all ages. We will review the functional anatomy and physiology of the bones, joints, and skin. We will discuss common disorders of the bones, joints, and skin, including infectious, structural, and traumatic injuries, in terms of disease mechanisms, diagnostics, and pharmacological management. We will also revisit the principles of immunology to allow us to discuss the rheumatologic disorders of the joints, skin, and vasculature. We will examine the myriad of clinical manifestations of some key systemic rheumatologic diseases.

# VI. COURSE OBJECTIVES

**At the end of the course, students should be able to do the following:**

1. Describe the development, structure, and organization of the skin and musculoskeletal system at the macroscopic (gross anatomy) and microscopic (histological) levels.
2. Describe normal skin and musculoskeletal prenatal development at the macroscopic and microscopic levels.
3. Describe the normal physiological function of the structures within the skin and musculoskeletal system.
4. Describe common disorders affecting the skin and musculoskeletal system including scleroderma, rheumatoid arthritis, osteoarthritis, and systemic lupus erythematosus.
5. Recognize the common clinical presentation and clinical course of skin and musculoskeletal disorders (symptoms, physical examination findings, laboratory, and radiographic findings).
6. Recognize the pathological features of common and significant diseases of the skin and musculoskeletal system.
7. Identify risk factors and preventive strategies in the development of skin and musculoskeletal disorders.
8. Describe the scientific basis, reliability, validity and interpretation of diagnostic tests used for skin and musculoskeletal diseases.
9. Identify the main classes of drugs used to treat skin and musculoskeletal disorders and describe their mechanism of action and potential side effects.
10. Asses the underlying factors contributing to health disparities, such as socioeconomic status, race/ethnicity, age, geographical location, language, disability status, citizenship status, and sexual identity and orientation gender, access to healthcare, education, and other environmental factors on skin and musculoskeletal diseases.
11. Describe any health care disparities that affect diagnosis, treatment and outcome in skin and musculoskeletal disorders.
12. Communicate effectively with peers and instructors on underlying principles of normal and abnormal skin and musculoskeletal structure and function.
13. Identify your own strengths and deficiencies in knowledge and skills
14. Incorporate feedback to modify behavior and develop skills.
15. Demonstrate capacity for professional and personal growth through reflection, leadership, and capacity to alter behavior to adjust to change.

# **VII. TIME MANAGEMENT**

Zucker School of Medicine has put together a [web page](https://medicine.hofstra.edu/academic-success/time-management.html) that will be very helpful to anyone who needs help managing their time while in college. The link is also available on LEO, under resources, along with other useful links.

# **VIII. HOW TO SUCCEED IN THIS COURSE**

## A. In Scholar**R**x **I**ntegrative **S**cientific & **C**linical **C**ase **D**iscussions =RxISCC)

RxISCC Discussions centers around real-life scenarios or cases to help students understand and apply their readings from ScholarRx in practical situations. Students engage in active problem-solving and critical thinking by analyzing and discussing these cases.

Here's a brief description of how students can prepare for case-based learning:

* Familiarize Yourself with the Case Format: Understand the structure of a typical case, including the background information, problem statement, and relevant data. Familiarize yourself with the terminology and concepts related to the subject matter.
* Review Relevant Concepts: Before diving into the cases, make sure you have a solid grasp of the foundational concepts related to the subject. Review your required materials in ScholarRx provided by your course director.
* Practice Active Reading: As you read through the cases, actively highlight important information, identify key issues, and make notes of potential solutions or recommendations.
* Participate Actively in Group Discussions: Case-based learning is often conducted in groups. Be prepared to actively participate in discussions, share your insights, and listen to others' perspectives. Collaborate with your peers to arrive at well-rounded solutions.
* Apply Critical Thinking: When analyzing the cases, think critically about the case and possible solutions. Consider the implications of different approaches and weigh the pros and cons.
* Stay Organized: Keep your case materials, and notes, organized (e.g., concept map) to easily refer back to relevant information during discussions and when preparing for assessments.
* Seek Feedback: Embrace feedback from your instructor and peers. Constructive feedback helps you refine your analytical skills and broaden your understanding of the subject matter.
* Reflect on the Learning Experience: After completing each case, take some time to reflect on the learning experience. Consider what you've learned, how it can be applied in real-life situations, and how you can improve your approach to future cases.

By actively engaging in RxISCC discussions and applying these strategies, students can enhance their problem-solving abilities, critical thinking skills, and ability to tackle real-world challenges effectively and your exams.

## B. In Problem-Based Learning

Problem-Based Learning (PBL) is a student-centered approach to education that focuses on developing problem-solving skills, critical thinking, and teamwork. Here's a brief summary of how to prepare for PBL as a student to do well:

* Active Participation: Engage actively in PBL sessions. Contribute your ideas, ask questions, and listen to your peers' perspectives. PBL is about collaborative learning, so your input is essential.
* Research Skills: Strengthen your research skills. PBL often requires finding relevant information, analyzing data, and drawing conclusions. Familiarize yourself with academic databases, libraries, and credible online resources. Your number one resource to go should be ScholarRx.
* Apply and study all curriculum themes (e.g., anatomy, physiology, pathology, pharmacology, health disparities, psychology and ethics) identified by the scenario.
* Time Management: PBL projects can be time-consuming. Develop good time management skills to balance PBL work with other academic commitments.
* Critical Thinking: Enhance your critical thinking abilities. PBL challenges you to think critically, identify problems, and devise practical solutions.
* Communication Skills: Effective communication is crucial in PBL. Work on expressing your ideas clearly and respectfully, as well as actively listening to others.
* Reflect and Evaluate: Regularly reflect on your PBL experiences. Assess your contributions, strengths, and areas for improvement. Seek feedback from peers and instructors to enhance your performance.
* Collaboration: Develop teamwork and collaboration skills. PBL involves working with others, and a cohesive team can produce more effective outcomes.
* Stay Curious: Cultivate a curious mindset. In PBL, curiosity drives exploration and fuels the desire to learning.
* Be Respectful: Respect your peers and their opinions. PBL thrives in an inclusive and supportive environment.

By following these guidelines, you can excel in problem-based learning and gain valuable skills that extend beyond the classroom setting. Embrace the process, be proactive, and enjoy the journey of learning through PBL. Remember, PBL is not just about finding the right answer, but about developing critical thinking, problem-solving, and collaboration skills that will serve you well in your academic and professional endeavors.

## C. In Team-Based Learning

Team-Based Learning (TBL) is an approach to small-group learning that puts emphasis on both pre-class student preparation and in-class application of knowledge. In this method, students are strategically grouped into diverse teams of 5-7 members, fostering collaboration throughout the class. To prepare for each TBL session, students are required to read the assigned ScholarRx Bricks before attending class.

At the start of the TBL session, students undergo an "Individual Readiness Assurance Test (iRAT)," followed by the same test taken as a team, referred to as the "Team Readiness Assurance Test (tRAT)." Both individual and group scores contribute to the students' overall grades. These tests are usually in a multiple-choice format, and the group test is often completed using a "scratch-off" sheet, encouraging students to engage in discussions about answer choices. The purpose of iRAT and tRAT is to prepare students for the in-class application activities that follow.

A noteworthy aspect of TBL is that all teams work on the same problem and simultaneously present their decisions. This structure necessitates teams to articulate their thought processes and provides them with an opportunity to evaluate their reasoning when confronted with differing decisions made by other teams. Peer evaluation plays a significant role in team-based learning, as it fosters accountability among students towards their team members.

To be fully prepared, successful, and actively engaged in the process, it is imperative to review the assigned Bricks, utilize the Flip cards, watch the Videos, and complete the practice questions in ScholarRx. Embracing these steps ensures optimal participation and learning outcomes in the TBL approach.

## D. In Anatomy Lab

Success in anatomy labs and practical exams requires a combination of preparation, organization, and active engagement. Here are some tips to help you excel in anatomy labs and practical assessments:

* Preparation is Key: Before attending the lab or practical, review the relevant anatomy material from your lectures or textbooks. Familiarize yourself with the structures you'll be studying in the lab.
* Utilize Resources: Take advantage of resources provided by your instructors, such as anatomical models, atlases, and online resources. These tools can help you understand the three-dimensional aspects of anatomy better.
* Study in Groups: Collaborating with peers can be beneficial. Discussing anatomical structures and quizzing each other can deepen your understanding and make the learning process more enjoyable.
* Attend Lectures and Demonstrations: If there are lectures or demonstrations before the lab, make sure to attend them. This will give you valuable insights and context to understand what you'll be doing in the lab.
* Be Punctual and Organized: Arrive at the lab on time and be well-prepared. Having a well-organized lab notebook or digital device to take notes will help you stay focused during the practical.
* Ask Questions: Don't hesitate to ask questions during the lab or practical. Seek clarification if you're unsure about a structure or procedure.
* Learn Anatomical Landmarks: Understanding anatomical landmarks will make it easier for you to identify structures correctly. Focus on key landmarks and their relationships to other structures.
* Practice Labeling and Identifying Structures: Regularly practice labeling anatomical diagrams or images. There are many online resources and apps available for this purpose.
* Create Memory Aids: Mnemonics, visualization techniques, and memory aids can help you remember complex anatomical information.
* Repetition and Review: Reviewing the material regularly will reinforce your understanding and memory of anatomical structures.
* Stay Calm During Practical Exams: On the day of the practical exam, stay calm and composed. Read the instructions carefully and take your time to answer each question thoroughly.
* Self-Assessment: Regularly assess your own knowledge and understanding. Identify areas where you need improvement and focus on them.
* Take Care of Yourself: Adequate rest, a balanced diet, and regular exercise can enhance your cognitive abilities and overall performance.

Remember that anatomy is a visual and hands-on subject, so engaging with the material actively is essential. By adopting these strategies, you can increase your chances of success in anatomy labs and practical exams.

# IX. COURSE POLICIES

## A. Attendance, Punctuality and Absence Policy

Students must attend mandatory sessions and exams and must be seated to start work on time. Students who sit for an exam are presumed to be well. Students who are not well on the date of an exam must notify the course director and [absence@med.cuny.edu](mailto:absence@med.cuny.edu). Students should refer to the Student Handbook for further information.

## B. Methods of Instruction

* **ScholarRx Integrative Scientific & Clinical Case Discussions** =RxISCC) (M): These are mandatory in-person case-based sessions facilitated by faculty experts covering specific topics from your directed self-learning of material from the relevant sections of ScholarRx.
* **Anatomy Lab (M):** Students will have both mandatory and voluntary (extra-curricular) review sessions in the anatomy dissection lab. Faculty will be always available to assist students in their dissection. CUNY-created anatomy videos will help prepare students for dissection. Students will also be able to attend ultrasound and virtual reality (VR) small group sessions to further enhance their knowledge of gross anatomy.
* **Problem-based Learning (PBLs) (M):** These are mandatory in-person small group sessions facilitated by faculty members in which students will explore specific topics in a self-directed fashion working both as a team and as individuals to cover all the learning objectives relevant to the topic.
* **Team-Based Learning (M):** Team based learning (TBL) sessions provide many advantages to students. They encourage deep learning and teamwork skills that are necessary in the modern practice of medicine. TBL is learner-centered and encourages students to apply the basic concepts to clinical situations.
* **Weekly Formative Quizzes and Review (M):** These quizzes will present NBME Step 1 style questions designed to allow faculty and students to assess student mastery of the material as they work through the module. Quizzes will be partially cumulative, some questions cycling back to topics covered more than one week prior to the quiz. Students who fail to show mastery on these quizzes will be referred for extra study help to maximize their performance in the end of module NBME examination.
* **Review sessions:** These sessions will be held just before the anatomy practical and NBME examinations to go over high yield material in all areas of study (anatomy, histology, pathology, physiology, pharmacology, clinical medicine, etc.) as students prepare for their end of module assessments.
* **Optional anatomy lab self-study sessions:** These are extra-curricular small group sessions held throughout the module in the evenings and on the weekends reviewing gross, ultrasound and VR anatomy. Instructors are available for these sessions. Students must sign up for these sessions ahead of time.

M stands for mandatory.

## C. Methods of Assessment

Exam questions are chosen to assess success in achieving the learning objectives listed in the syllabus and Scholar RX bricks. Labs, assigned readings, and other supplemental material are provided to ensure student success. See the schedule for the dates for the quizzes and the exams.

**Formative assessments**: The goal of formative assessments are to track student learning and to provide ongoing feedback to students and course directors. Formative assessments: 1) help students identify their strengths and weaknesses; 2) target areas that need work; 3) help faculty recognize where students may require additional educational support.

Examples of formative assessments include weekly quizzes, asking students to draw concept maps in class to represent their understanding of a topic and submitting one or two sentences identifying the main point of a lecture.

**Summative assessments:** Summative assessment count towards the final grade. Examples of summative assessments include exams and assigned projects.

All assessments, whether they are formative or summative, are mandatory at the CUNY School of Medicine. This course utilizes several methods of assessment:

|  |  |
| --- | --- |
|  | **Method** |
| **Formative assessments:** | Weekly quizzes, PBL feedback |
| **Summative assessments:** | 1. NBME Customized Assessment 2. Practical exam 3. Case-based Learning Components (see the description below) |

**Formative assessments:**

* **Weekly quizzes:** Most questions will be multiple-choice questions and others will be Answer justifications (AJ) to multiple-choice questions (to learn more about AJ MCQs, see below).
* **PBL evaluation** is composed of 2 parts. Part 1 evaluates punctuality and attendance, and it is a summative assessment. Part 2 evaluates professionalism, Interpersonal Skills, Communication, Life-long Learning, and Medical Knowledge and it is a formative assessment. Students performing poorly in any of these skills will be asked to meet with the PBL Director.

|  |  |
| --- | --- |
| **Rubric for the PBL sessions** | |
| The following three items are summative and will be included in the assessment of the Case-based Learning Components. | |
| P\*: 5:10: Punctual in Session 1 | No (arrives after 5 min) |
| Yes (arrives within 5 min) |
| Absent (no show or arrives after 30 min) |
| P: 5:10: Punctual in Session 2 | No (arrives after 5 min) |
| Yes (arrives within 5 min) |
| Absent (no show or arrives after 30 min) |
| P: 5:10: Punctual in Session 2 | No (arrives after 5 min) |
| Yes (arrives within 5 min) |
| Absent (no show or arrives after 30 minutes) |
| Not applicable (The PBL had only 2sessions.) |
| The following items are assessed formatively. | |
| ISC: 4.1: Demonstrates respect for the facilitator and peers. | Satisfactory |
| Needs improvement |
| Unable to assess |
| MK\*:2.9: Demonstrates a clear understanding of the patient’s chief complaints and concerns. | Satisfactory |
| Needs improvement |
| Unable to assess |
| ISC\*: 4.1 and ISC:4.4:  Collaborates well with peers. | Satisfactory |
| Needs improvement |
| Unable to assess |
| LLL\*: 3.1 and MK:2.9: Quality of communication and presentation demonstrates appropriate research and understanding. | Satisfactory |
| Needs improvement |
| Unable to assess |
| MK:2.9: Applies basic science knowledge to address the patient’s problem(s). | Satisfactory |
| Needs improvement |
| Unable to assess |
| LLL: 3.6: Demonstrates critical thinking to problem-solving. | Satisfactory |
| Needs improvement |
| Unable to assess |
| LLL:  3.1 and 3.2: Identifies their strengths and weaknesses for self-improvement. | Satisfactory |
| Needs improvement |
| Unable to assess |
| ISC: 4.1 and ISC:4.4: Provides constructive feedback to peers. | Satisfactory |
| Needs improvement |
| Unable to assess |
| Each item above has a follow-up optional entry: Provide feedback if you chose "needs improvement" or "unable to assess." | |
| Provide feedback for improvement and/or commendation. | |
| Additional comments: | |

\*P=Professionalism; MK= Medical Knowledge; ISC= Interpersonal Skills and Communication; LLL= Life-Long Learning

* **Case-based Learning Components are composed of the following:**

|  |  |
| --- | --- |
|  | Attendance (Scholar**R**x **I**ntegrative **S**cientific & **C**linical **C**ase **D**iscussions =RxISCC) |
|  | Problem-based Learning (PBL)-Part 1(Punctuality/Attendance and PBL Quizzes\*) |
|  | Team-based Learning (TBL)- Individual Readiness Assurance Test (iRAT) and Team Readiness Assurance Test (tRAT) |

\*Punctuality is defined as being in the class within the first 5 minutes. Absence is defined as being late more than 30 minutes or unexcused absence.

**Summative Assessments:**

* **NBME Customized Exam** has 100 multiple-choice questions that were mapped to the learning objectives. The questions are selected by the teaching faculty under the guidance of the course director.
* **Practical Exam** is composed of embryologic and anatomic subject content. Practical exams will take place in the Anatomy Lab and consist of multiple-choice questions.
* **Case-based Learning Components** measure attendance and punctuality defined as being in class no later than 5 minutes after the class begins. Absence is defined as being late more than 30 minutes or unexcused absence. In addition, it will assess the PBL quizzes, iRATs (individual Readiness Assurance Test), and tRATS (team Readiness Assurance Test) using multiple-choice questions (10-15).

## D. Grading Policy and Criteria for Passing

**Weekly formative quizzes:** Although formative (do not count towards the course grade), they are mandatory. Students who receive less than 70% on any quiz will have required remediation organized by the course director. Students may need to meet with their student advisor from the Student Affairs Office and a specialist at the LRC.

Students should pass all the summative assessments with a 70% or above to receive a P (Pass) grade.

|  |  |
| --- | --- |
| **Grade** | **Actions** |
| 70 or above (NBME exam, Lab Practical, and Case-based Learning Components | Student receives a Pass (P) |
| 69 or below\* | If eligible, students who receive 69 or below in individual graded module components (NMBE exam and/or Practical) and/or Case-based Learning Component) must take a reassessment exam. |

|  |  |
| --- | --- |
| **Grading Scheme for those who failed the module (69 or below)** | |
| Failure in the NBME exam | Student receives a C (Conditional) |
| Failure in the Practical Exam | Student receives a U (Unsatisfactory) |
| Failure in the Case-based Learning Components | Student receives a U (Unsatisfactory) |

**Grading for the Case-based Learning Components. The schema is shown below.**

## D. Reassessment

Students reassess only the summative assessments they failed, e.g., if a student fails the NBME exam and is eligible to take the reassessment, they will only take the NBME customized reassessment examination.

**Method of reassessment**

**Reassessment of the NBME Exam:**

Reassessments will not be repeat Multiple-Choice Examinations. Reassessment examinations will be based on Answer Justifications (AJ) to multiple-choice questions. The reassessment will have 10-15 in-house board-style multiple-choice questions that ask students to describe why their choice is correct and justify why other answer choices are incorrect. This assessment format will help students become deep learners to transform the relevant material into long-term memory. Feedback will be provided to learners about their performance on constructed response questions that serves two purposes.

1) feedback to learners can correct errors or misconceptions.

2) feedback regarding the format and content of correct answers on summative examinations and guidance about distinguishing features of correct and insufficient responses assures learners that the exam and scoring procedures are rigorous and not biased.

The question will have 2 parts. In part 1, students choose the correct answer, and in part 2, students explain selecting one of the options as correct and the others as incorrect. Both parts need to be answered. Part 2 is **hand-corrected anonymously** by the question's author using a standardized rubric, with the students awarded a mark of 0, 0.5, or 1 (out of 1) for their answers.

An example of answer justifications (AJ) to multiple-choice questions:

Instructions.

Identify your choice as the correct answer and explain your reasoning. For example, detail the involved pathophysiologic mechanism, history or physical examination findings, drug indication, or drug action that makes your choice the best answer. Next, explain why the remaining options are not likely the correct answer. You should generally write 1-3 sentences describing your choice.

1) **A 50-year-old woman is prescribed oral methotrexate for rheumatoid arthritis. Folic acid is added to this treatment to avoid methotrexate induce toxicity because it does which of the following?**

A) Blocks renal excretion of methotrexate

B) Inhibits methotrexate metabolism

C) Adds synergistic anti-inflammatory effect to methotrexate

D) Prevents methotrexate interference with certain metabolic pathways within the cell

Part 1: Choose the correct answer and explain your rationale.

D) is correct. MTX is a structural analogue of folic acid and can competitively inhibit the binding of dihydrofolate to the enzyme dihydrofolate reductase, which is responsible for reducing dihydrofolate to folinic acid. Thus, MTX decreases the amount of folic acid available and affects the metabolic pathways within the cell that are folinic acid dependent.

Part 2: Explain your rationale for each choice that you did not choose as the correct answer.

A) is wrong as folic acid does not affect renal excretion of methotrexate. 80-9-% of methotrexate is renally excreted. Blocking renal excretion would increase toxicity.

B) is wrong because MTX inhibits folic acid metabolism. Folic acid does not inhibit methotrexate metabolism.

C) Folic acid has no anti-inflammatory effects

**The rubric to grade each question is shown below.**

|  |  |  |  |
| --- | --- | --- | --- |
| Topic tested | Question | Choices (Part 1) 2 points | Explanation (Part 2) 2 points |
| Management of arthritis | 1) A 50-year-old woman is prescribed oral methotrexate for rheumatoid arthritis. Folic acid is added to this treatment to avoid methotrexate induce toxicity because it does which of the following? | A) Blocks renal excretion of methotrexate  B) Inhibits methotrexate metabolism  C) Adds synergistic anti-inflammatory effect to methotrexate  D) Prevents methotrexate interference with certain metabolic pathways within the cell | 0- Did not answer the question.  2- points for each= Appropriate justification for each option (correct or wrong answer choice) |

**Students were required to answer both part 1 and part 2, although the two parts were corrected separately.**

* **Reassessment of the Practical Exam** comprises embryologic and anatomy content. They will be administered using electronically using LEO and are multiple-choice question based.
* **Reassessment of Case-based Learning Components** will be similar in format to the reassessment of the NBME Exam, i.e., answer justifications (AJ) to multiple-choice questions. The exam will have 10-15 questions about the PBL and the TBL content. The same rubric will be used as above.

**The grading scale upon reassessment is shown below:**

|  |  |
| --- | --- |
| **Reassessment of the NBME exam** | |
| Final Module Grade | Actions |
| 70 or above | Student receives a Conditional Pass (CP) |
| 69 or below | Student receives a Conditional Fail (CF) |

|  |  |
| --- | --- |
| **Practical Reassessment** | |
| Final Module Grade | Actions |
| 70 or above | Student receives a P |
| 69 or below | Student receives a Fail (UF) |

|  |  |
| --- | --- |
| **Case-based Learning Components** | |
| Final Module Grade | Actions |
| 70 or above | Student receives a P |
| 69 or below | Student receives a Fail (UF) |

**The Office of Academic Affairs and Student Academic Progress Committee (SAPC) determines eligibility to take a reassessment exam. Students should refer to the Student Handbook for further information.**

## E. Academic Integrity and Exam Policy

The CUNY School of Medicine Policy on Academic Integrity and Exam Policy can be found in the Student Handbook. Please review the policy very carefully. If we suspect any breaches of academic integrity, including plagiarism, we will follow the procedure for addressing violations of academic integrity as approved by CUNY School of Medicine, with no exceptions made.

## F. Fostering an Inclusive Learning Environment

I, Elliot Goodman, would like to create a learning environment for my students that supports a diversity of thoughts, perspectives, and experiences and honors your identities (including race, gender, class, sexuality, religion, ability, etc.).

To help create this environment, please take note of the following:

* If you have a name and/or set of pronouns that differ from those that appear in your official records, please let me know.
* If you feel like your experiences outside of the course impact your class performance, please do not hesitate to come and talk with me.
* I want to be a resource for you. Remember that you can also submit anonymous feedback. If necessary, I would make a general announcement to the class to address your concerns). If you prefer to speak with someone outside of the course, Dr. Elizabeth A Wilson-Anstey(ewilsonanstey@med.cuny.edu), Dean for Diversity and Inclusion, is a resource.
* Like many people, I am still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please talk to me about it. Again, anonymous feedback is always an option.
* It is my intent that students from all diverse backgrounds and perspectives will be well served by this course, that students' learning needs will be addressed both in and out of class, and that the diversity that students bring to this class will be viewed as a resource, strength, and benefit. It is my intent to present materials and activities that are respectful of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and cultural diversity. Your suggestions are encouraged and appreciated. Please let me know of ways to improve the effectiveness of the course for you personally or other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so we can make arrangements for you.

In addition to the personal statement of the CD, there is an institutional diversity statement ( [**CUNY School of Medicine Diversity Equity and Inclusion Policy**](https://cunymed.org/diversity-education-and-inclusion-statement/)).

# X. STUDENT EVALUATION OF THE COURSE

The Office of Medical Education requires that all medical students complete end-of-course evaluations. Providing constructive curricular program feedback is a student's professional responsibility and is essential for continuous quality improvement of the medical school curriculum. Students who submit evaluations in 80% of their courses will receive a Professionalism Commendation that will be documented in their Medical Student Performance Evaluation.

# XI. MISTREATMENT

The Office of Student Affairs will monitor and track all alleged mistreatment reports. Students should refer to the Student Handbook for further information.

[Mistreatment Reporting](https://cunymed.org/mistreatment-reporting/)

# XII. RESOURCES AVAILABLE TO HELP YOU AT the CUNY SCHOOL OF MEDICINE

## A. Learning Resource Center

The [CUNY School of Medicine, Learning Resource Center](https://cunymed.org/learning-resource-center/) offers group and individual tutorial services. All students are encouraged to avail themselves of the various services the LRC offers. Follow the link below for more information, to make an appointment, or to sign up for services:

## B. Accommodations for Students With Disabilities:

[CUNY School of Medicine Accessibility Center](https://cunymed.org/accessability-center/) ensures equal access and full participation in all programs, services, and activities by coordinating and implementing appropriate accommodations. If you are a student with a disability who requires accommodations and services, please visit the Accessibility Center before communicating with the lecture and lab instructors about your disability or required accommodations. Students must provide a letter from the Accessibility Center to the instructor notifying the course director of the required accommodations. At least 1 week before an exam, the students must provide the instructor with a signed exam accommodation form.

## C. Counseling and Wellness Office

It is not uncommon for students to experience stress and anxiety during their studies. Often, students find it helpful to take advantage of the [CUNY Med Counseling Office](https://cunymed.org/counseling-and-wellness-office/) to help address their concerns.

## D. Additional Resources

Students who find themselves experiencing difficulties obtaining food every day or who lack a stable and safe place to live are urged to come to Benny’s pantry for assistance.

Benny’s pantry is located on the ground floor of the North Academic Center (NAC) and is open to anyone within the CUNY community (students, staff, faculty) in need of support. The pantry is open from 10am to 6pm and is self-serve. Additional emergency support for financial, health and housing needs are also available through Benny’s. Please contact Dee Dee Mozeleski at [dmozeleski@ccny.CUNY.edu](mailto:dmozeleski@ccny.CUNY.edu) or Charles Ramirez @[cramirez@ccny.CUNY.edu](mailto:cramirez@ccny.CUNY.edu) for additional details.

[Benny’s Food Pantry](https://www.ccny.cuny.edu/bennysfoodpantry)

The food pantry is available to all members of the CCNY community regardless of their level of need.

Food insecurity:     [Supplemental Nutrition Assistance Program](https://listmanager.ccny.cuny.edu/t/20617/2607957/6636/10/)

Housing insecurity:     [Healthy CUNY](https://listmanager.ccny.cuny.edu/t/20617/2607957/6638/19/)

Financial insecurity:    [Petrie Student Emergency Grants](https://listmanager.ccny.cuny.edu/t/20617/2607957/6639/21/)

# XIII. FREQUENTLY ASKED QUESTIONS

Learning Recommendations for Organ System Modules

|  |  |
| --- | --- |
| Concern | Recommendation |
| 1. What resources should I use to study? | The Syllabus for each module indicates the resources to use to best address the learning objectives in each session. Scholar Rx is now central to the material you are expected to learn. The questions on the organ system module final NBME exam are chosen based on the learning objectives and the resources indicated (Scholar Rx) in the syllabus. |
| 2. What is the purpose of quizzes? | The quizzes are best used to help you track your understanding of the course content, and whether your learning strategy is successful. Faculty will use quizzes to determine how you are doing in the course. The quizzes will not count for your final numerical grade, but you must take the quizzes to pass the module. |
| 3. I’m too tired to study. | The more active the learning process the more likely you are to stay mentally engaged and awake. Ways to engage in active learning using Scholar Rx include:   * Creating and using Flashcard decks and smart notes. * Testing yourself with the review questions at the end of each brick. * At the end of each brick assess how well you did in achieving the brick learning objectives. * Watching the express videos and rating your confidence on the material presented * Testing yourself with Qmax questions * Taking practice exams in Scholar Rx * Reviewing First Aid related facts * Use the downloadable workbook you can access in the videos. |
| 4. There is too much material to learn. | When studying for course exams, many students feel like there is too much information to learn. Start by reviewing the course objectives. These will be your highest yield topics. |
| 5. I am easily distracted | If you have ADHD or might have challenges with concentration, seek a diagnosis and treat it. If you have a learning disorder, get it evaluated and obtain accommodations. Physicians are notoriously bad at taking care of themselves. If you don’t have ADHD or a learning disorder, but still find yourself easily distracted see strategies for #3 which provides tips for active learning. |
| 6. I have trouble making a study schedule. | Make an appointment to meet with a learning specialist at the LRC |
| 7. I have trouble following a study schedule. | Find a method for keeping you accountable to your study schedule. Set deadlines and create rewards. Seek advice from one of our learning specialists |
| 8. What is the best approach for studying practice questions | * Do timed questions before reviewing material to stimulate retrieval practice and intentional studying. * Ask yourself, “What is the question really asking?” The best way to determine if you understand the material is after reading the clinical vignette and lead in to the choices cover the choices and see if you have an answer. * If you get a question wrong while you are studying, ask yourself how would they have written the question for my incorrect choice to be correct? (i.e., in order for “S. pneumoniae” to be correct, they would have to tell us that the patient was febrile and has focal rales, egophony or an infiltrate on the chest X-ray. They did not so the answer must be “a. COPD exacerbation”) * For questions missed, did you not know the information? Not spend enough time on the question? Misread the question? Forget to read all of the answer choices? Get discouraged and invest less effort in the question? * Take note of any misconceptions in your reasoning about the concepts you got wrong. * Redo missed questions at a later date for spaced repetition learning. |
| 9. I would do better if I have enough time to finish the questions on the test. | * Have a consistent approach to answering questions. i.e., Read the question at the end of the passage first, then go back and read through the body of the question, consider an answer, and then read the answer choices. * Be sure to synthesize information as you are reading questions: read 180/90 not as numbers but as “very hypertensive.” * If you have trouble finishing tests on time: you will want to practice larger blocks of questions (40-50) where you time yourself to help establish your pace. Keep track of how long it takes to complete a certain number of questions. Are you getting faster with each block? * Learn to manage the clock during the exam. How often do you look at the clock? Is it helping you move through the questions or taking up too much time? Decide how long you should spend on 10 questions, and by what time you want to have them answered. Look at the clock after every 10 questions or if you think a question is taking too long. How much time do you have left to finish the 10 questions or that block of the exam? Get comfortable looking at the clock quickly and making a quick decision based on how much time has passed. * Repetition leads to efficiency, especially if English is not your first language. You will likely benefit from talking to a remediation or learning specialist. * Work on questions with a teacher who can watch you work through questions aloud and help you identify challenges…Do you get distracted?  Do you key in on the most valuable information? Do you lose this train of thought and have to go back and reread? Do you become paralyzed just before you choose an answer? Do you overthink questions and miss the obvious points? |
| 10. I’m very anxious about taking the exam | * Practice test taking strategies in your study sessions to reduce test anxiety and increase your confidence in taking exams. * Make sure that when you are seated and taking the exam that you are leaning forward into the exam. You have got this! It doesn’t have you. * If your anxiety is paralyzing, strongly consider seeking treatment. Students, residents, and fellows actively and frequently seek mental health help throughout training, including for exams. |

# XIV. WEEKLY LECTURE TOPICS, READINGS, AND ASSIGNMENTS

|  |  |  |
| --- | --- | --- |
| Week | Lecture Topic | Readings |
| Whole course |  | Use as a reference throughout the year: Dean Iannuzzi’s PPT (posted on LEO) |
| WEEK 1 | | |
| 8/7/2023 | SESSION 1  RxISCC Discussion: Musculoskeletal system - Normal Structure, Normal Development | Musculoskeletal Anatomy- Foundations and Frameworks  [**https://exchange.scholarrx.com/brick/musculoskeletal-anatomy-foundations-and-frameworks**](https://exchange.scholarrx.com/brick/musculoskeletal-anatomy-foundations-and-frameworks)  Development of the Musculoskeletal System  [**https://exchange.scholarrx.com/brick/development-of-the-musculoskeletal-system**](https://exchange.scholarrx.com/brick/development-of-the-musculoskeletal-system) |
| SESSION 2  RxISCC Discussion: Musculoskeletal system - Normal Histology | Normal Histology of Connective Tissue  [**https://exchange.scholarrx.com/brick/histology-of-connective-tissue**](https://exchange.scholarrx.com/brick/histology-of-connective-tissue)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232920;video=641**](https://usmle-rx.scholarrx.com/video-player;playlist=232920;video=641) **(video - 2 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232920;video=626**](https://usmle-rx.scholarrx.com/video-player;playlist=232920;video=626) **(video - 5 mins)**  Normal Histology of Bone and Cartilage  [**https://exchange.scholarrx.com/brick/histology-of-bone-and-cartilage**](https://exchange.scholarrx.com/brick/histology-of-bone-and-cartilage)  [**https://usmle-rx.scholarrx.com/video-player;playlist=233038;video=1554**](https://usmle-rx.scholarrx.com/video-player;playlist=233038;video=1554) **(video - 2 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=233038;video=2410**](https://usmle-rx.scholarrx.com/video-player;playlist=233038;video=2410) **(video - 4 mins)**  Normal Histology of Muscle  [**https://exchange.scholarrx.com/brick/histology-of-muscle-tissue**](https://exchange.scholarrx.com/brick/histology-of-muscle-tissue)  [**https://usmle-rx.scholarrx.com/video-player;playlist=233038;video=1544**](https://usmle-rx.scholarrx.com/video-player;playlist=233038;video=1544) **(video - 8 mins)** |
| 8/8/2023 | Self-Study Session | Sessions #3/4/5 |
| Library Orientation & PICO |  |
| Faculty Office Hours |  |
| 8/9/2023 | SESSION 3  RxISCC Discussion: Musculoskeletal system - Normal Physiology | Biology of bone & muscle  [**https://exchange.scholarrx.com/brick/calcium-and-phosphate-homeostasis**](https://exchange.scholarrx.com/brick/calcium-and-phosphate-homeostasis)  [**https://exchange.scholarrx.com/brick/muscle-contraction**](https://exchange.scholarrx.com/brick/muscle-contraction)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232999;video=2416**](https://usmle-rx.scholarrx.com/video-player;playlist=232999;video=2416) **(video - 7 mins)** |
| SESSION 4  RxISCC Discussion: Musculoskeletal system - Pathologic Development | Developmental disorders of the bone  [**https://exchange.scholarrx.com/brick/developmental-disorders-of-bone**](https://exchange.scholarrx.com/brick/developmental-disorders-of-bone)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232898**](https://usmle-rx.scholarrx.com/video-player;playlist=232898) **(video - 2 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232898;video=629**](https://usmle-rx.scholarrx.com/video-player;playlist=232898;video=629) **(video - 3 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232898;video=862**](https://usmle-rx.scholarrx.com/video-player;playlist=232898;video=862) **video - 3 mins)**  Structural Protein Disorders:  Ehlers-Danlos Syndrome and Marfan Syndrome  [**https://exchange.scholarrx.com/brick/ehlers-danlos-syndrome-and-marfan-syndrome**](https://exchange.scholarrx.com/brick/ehlers-danlos-syndrome-and-marfan-syndrome)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232920**](https://usmle-rx.scholarrx.com/video-player;playlist=232920) **(video - 3 mins)**  Muscular dystrophy  [**https://exchange.scholarrx.com/brick/muscular-dystrophy**](https://exchange.scholarrx.com/brick/muscular-dystrophy)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232952;video=1043**](https://usmle-rx.scholarrx.com/video-player;playlist=232952;video=1043) **(video - 5 mins)** |
| 8/10/2023 | Anatomy- Gross Dissection | Lab |
| Self-Study Session | Sessions #6/7 |
| 8/11/2023 | SESSION 5  RxISCC Discussion: Musculoskeletal system - Pathophysiology of Pediatric Conditions | Pathophysiology of pediatric musculoskeletal conditions  [**https://www.merckmanuals.com/home/children-s-health-issues/juvenile-idiopathic-arthritis-jia/juvenile-idiopathic-arthritis-jia?query=jia**](https://www.merckmanuals.com/home/children-s-health-issues/juvenile-idiopathic-arthritis-jia/juvenile-idiopathic-arthritis-jia?query=jia)  [**https://www.merckmanuals.com/home/children-s-health-issues/birth-defects-of-the-face,-bones,-joints,-and-muscles/developmental-dysplasia-of-the-hip?query=hip%20dysplasia**](https://www.merckmanuals.com/home/children-s-health-issues/birth-defects-of-the-face,-bones,-joints,-and-muscles/developmental-dysplasia-of-the-hip?query=hip%20dysplasia)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232846**](https://usmle-rx.scholarrx.com/video-player;playlist=232846) **(video - 14 mins)** |
|  | Self-Study Session | Sessions #8/9/10 |
| SESSION 6  RxISCC Discussion: Musculoskeletal system - Pathophysiology of Inflammatory and Post-traumatic Conditions | Pathophysiology of inflammatory and post-traumatic conditions  [**https://exchange.scholarrx.com/brick/tendonitis-and-bursitis**](https://exchange.scholarrx.com/brick/tendonitis-and-bursitis)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232931**](https://usmle-rx.scholarrx.com/video-player;playlist=232931) **(video - 1 min)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232931;video=2412**](https://usmle-rx.scholarrx.com/video-player;playlist=232931;video=2412) **(video - 6 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232931;video=2253**](https://usmle-rx.scholarrx.com/video-player;playlist=232931;video=2253) **(video - 4 mins)** |
| SESSION 7  RxISCC Discussion:  Benign and Malignant Musculoskeletal Tumors | Soft tissue tumors  [**https://exchange.scholarrx.com/brick/soft-tissue-tumors**](https://exchange.scholarrx.com/brick/soft-tissue-tumors)    Bony tumors  [**https://exchange.scholarrx.com/brick/primary-bone-tumors**](https://exchange.scholarrx.com/brick/primary-bone-tumors)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232949**](https://usmle-rx.scholarrx.com/video-player;playlist=232949) **(video - 12 mins)** |
| 8/14/2023 | MSK Weekly Quiz #1 & Review |  |
| MSK PBL Session 1 |  |
| SESSION 8  RxISCC Discussion: Pathophysiology, Clinical Presentation and Treatment of Musculoskeletal Trauma | Fractures & other common orthopedic conditions: Foundations and Frameworks  [**https://exchange.scholarrx.com/brick/bone-fractures-foundations-and-frameworks**](https://exchange.scholarrx.com/brick/bone-fractures-foundations-and-frameworks)  [**https://exchange.scholarrx.com/brick/common-bone-fractures**](https://exchange.scholarrx.com/brick/common-bone-fractures)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232861**](https://usmle-rx.scholarrx.com/video-player;playlist=232861) **(video - 2 mins)**  [**https://www.youtube.com/watch?v=vcgKLDzILfs**](https://www.youtube.com/watch?v=vcgKLDzILfs) **(Harvard video on surgery for hip fracture - 15 mins)**  Traumatic Muscle Injury  [**https://exchange.scholarrx.com/brick/traumatic-muscle-injury**](https://exchange.scholarrx.com/brick/traumatic-muscle-injury)  [**https://usmle-rx.scholarrx.com/video-player;playlist=230546**](https://usmle-rx.scholarrx.com/video-player;playlist=230546) **(video - 8 mins)**  [**https://www.youtube.com/watch?v=o7LgxmLk8Ds**](https://www.youtube.com/watch?v=o7LgxmLk8Ds) **(Harvard video on compartment syndrome - 18 mins)** |
| 8/15/2023 | SESSION 9  TBL Session: Pathophysiology, Clinical Presentation  and Treatment of Inflammatory and Non-inflammatory Joint Conditions – TBL | Arthritis: Putting It All Together  [**https://exchange.scholarrx.com/brick/arthritis-putting-it-all-together**](https://exchange.scholarrx.com/brick/arthritis-putting-it-all-together)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232846;video=883**](https://usmle-rx.scholarrx.com/video-player;playlist=232846;video=883) **(video - 10 mins)**  Osteoarthritis  [**https://exchange.scholarrx.com/brick/osteoarthritis**](https://exchange.scholarrx.com/brick/osteoarthritis)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232959;video=1580**](https://usmle-rx.scholarrx.com/video-player;playlist=232959;video=1580) **(video - 2 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232959;video=1573**](https://usmle-rx.scholarrx.com/video-player;playlist=232959;video=1573) **(video - 1 min)**  Rheumatoid arthritis  [**https://exchange.scholarrx.com/brick/rheumatoid-arthritis**](https://exchange.scholarrx.com/brick/rheumatoid-arthritis)  [**https://usmle-rx.scholarrx.com/video-player;playlist=230442**](https://usmle-rx.scholarrx.com/video-player;playlist=230442) **(video - 3 mins)**  Gouty arthritis  [**https://exchange.scholarrx.com/brick/crystal-induced-arthritis**](https://exchange.scholarrx.com/brick/crystal-induced-arthritis)  [**https://usmle-rx.scholarrx.com/video-player;playlist=230523;video=866**](https://usmle-rx.scholarrx.com/video-player;playlist=230523;video=866) **(video - 6 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=230523;video=872**](https://usmle-rx.scholarrx.com/video-player;playlist=230523;video=872) **(video - 2 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=230523;video=1571**](https://usmle-rx.scholarrx.com/video-player;playlist=230523;video=1571) **(video - 5mins)** |
| SESSION 10  RxISCC Discussion:  Immune-mediated/Inflammatory Systemic, Muscular and Joint Conditions | Myopathies  [**https://exchange.scholarrx.com/brick/inflammatory-myopathies**](https://exchange.scholarrx.com/brick/inflammatory-myopathies)  [**https://exchange.scholarrx.com/brick/electromyography-and-nerve-conduction-studies**](https://exchange.scholarrx.com/brick/electromyography-and-nerve-conduction-studies)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232933**](https://usmle-rx.scholarrx.com/video-player;playlist=232933) **(video - 3 mins)**  Spondyloarthropathies  [**https://exchange.scholarrx.com/brick/spondyloarthropathies**](https://exchange.scholarrx.com/brick/spondyloarthropathies)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232997**](https://usmle-rx.scholarrx.com/video-player;playlist=232997) **(video - 3 mins)**  SLE & Sjögren syndrome  [**https://exchange.scholarrx.com/brick/systemic-lupus-erythematosus**](https://exchange.scholarrx.com/brick/systemic-lupus-erythematosus)  [**https://exchange.scholarrx.com/brick/sjoumlgren-syndrome**](https://exchange.scholarrx.com/brick/sjoumlgren-syndrome)  [**https://usmle-rx.scholarrx.com/video-player;playlist=230443;video=871**](https://usmle-rx.scholarrx.com/video-player;playlist=230443;video=871) **(video - 6 mins)**  Systemic sclerosis  [**https://exchange.scholarrx.com/brick/systemic-sclerosis**](https://exchange.scholarrx.com/brick/systemic-sclerosis)  [**https://usmle-rx.scholarrx.com/video-player;playlist=230443;video=2320**](https://usmle-rx.scholarrx.com/video-player;playlist=230443;video=2320) **(video - 9 mins)** |
| Faculty Office Hours |  |
| 8/16/2023 | Self-Study Session | Session #12/13 |
| 8/17/2023 | SESSION 11  RxISCC Discussion:  Pathophysiology, Clinical Presentation and treatment of musculoskeletal trauma - (Continued) |  |
| SESSION 12  RxISCC Discussion:  Functional Disorders of the Musculoskeletal System | Functional disorders of the musculoskeletal system  [**https://exchange.scholarrx.com/brick/fibromyalgia-and-complex-regional-pain-syndrome**](https://exchange.scholarrx.com/brick/fibromyalgia-and-complex-regional-pain-syndrome)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232913**](https://usmle-rx.scholarrx.com/video-player;playlist=232913) **(video - 1 min)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232913;video=2281**](https://usmle-rx.scholarrx.com/video-player;playlist=232913;video=2281) **(video - 3 mins)** |
| SESSION 13  TBL Session:  Musculoskeletal system - Degenerative and Metabolic Disorders – TBL | Degenerative and metabolic disorders  [**https://exchange.scholarrx.com/brick/acquired-bone-disorders**](https://exchange.scholarrx.com/brick/acquired-bone-disorders)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232835;video=875**](https://usmle-rx.scholarrx.com/video-player;playlist=232835;video=875) **(video - 2 mins)**  Osteoporosis  [**https://exchange.scholarrx.com/brick/osteoporosis**](https://exchange.scholarrx.com/brick/osteoporosis)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232835;video=876**](https://usmle-rx.scholarrx.com/video-player;playlist=232835;video=876) **(video - 14 mins)** |
| 8/18/2023 | Self-Study Session | Sessions #14/PBL |
| 8/21/2023 | MSK Weekly Quiz #2 & Review |  |
| MSK PBL Session 2 |  |
| 8/22/2023 | Self-Study Session | Sessions #15/16/17 |
| Faculty Office Hours |  |
| 8/23/2023 | SESSION 14  RxISCC Discussion:  Skin and Soft Tissues - Normal Structure and Basics of Dermatologic Diagnosis | Normal Histology  [**https://exchange.scholarrx.com/brick/histology-of-epithelial-tissue**](https://exchange.scholarrx.com/brick/histology-of-epithelial-tissue)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232906**](https://usmle-rx.scholarrx.com/video-player;playlist=232906) **(video - 5 mins)**  Normal Histology of the Skin  [**https://exchange.scholarrx.com/brick/histology-of-the-skin**](https://exchange.scholarrx.com/brick/histology-of-the-skin)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232984**](https://usmle-rx.scholarrx.com/video-player;playlist=232984) **(video - 7 mins)**  Normal Histology of Adipose Tissue [**https://exchange.scholarrx.com/brick/histology-of-adipose-tissue**](https://exchange.scholarrx.com/brick/histology-of-adipose-tissue)  [**https://usmle-rx.scholarrx.com/video-player;playlist=233048**](https://usmle-rx.scholarrx.com/video-player;playlist=233048) **(video - 4 mins)**  Developing a dermatologic vocabulary  [**https://exchange.scholarrx.com/brick/macroscopic-skin-lesions**](https://exchange.scholarrx.com/brick/macroscopic-skin-lesions)  [**https://usmle-rx.scholarrx.com/first-aid?id=1657&firstAidYear=2022**](https://usmle-rx.scholarrx.com/first-aid?id=1657&firstAidYear=2022) |
| SESSION 15  RxISCC Discussion:  Skin and soft Tissues - Introduction to Pathology and Clinical Manifestations of Disease | Acne, Rosacea and Adnexal Disease  [**https://exchange.scholarrx.com/brick/acne-rosacea-and-other-follicular-disorders**](https://exchange.scholarrx.com/brick/acne-rosacea-and-other-follicular-disorders)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232833;video=1569**](https://usmle-rx.scholarrx.com/video-player;playlist=232833;video=1569) **(video - 14 mins)**  Pigmentation disorders  [**https://exchange.scholarrx.com/brick/disorders-of-pigmentation**](https://exchange.scholarrx.com/brick/disorders-of-pigmentation)  [**https://www.merckmanuals.com/home/skin-disorders/pigment-disorders/melasma**](https://www.merckmanuals.com/home/skin-disorders/pigment-disorders/melasma)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232900;video=1563**](https://usmle-rx.scholarrx.com/video-player;playlist=232900;video=1563) **(video - 3 mins)**  Toxin-related disorders  [**https://exchange.scholarrx.com/brick/toxin-related-skin-disorders**](https://exchange.scholarrx.com/brick/toxin-related-skin-disorders)  [**https://usmle-rx.scholarrx.com/video-player;playlist=233031;video=2780**](https://usmle-rx.scholarrx.com/video-player;playlist=233031;video=2780) **(video - 3 mins)**  Hair loss and age-related skin conditions  [**https://exchange.scholarrx.com/brick/macroscopic-skin-lesions**](https://exchange.scholarrx.com/brick/macroscopic-skin-lesions)  [**https://www.merckmanuals.com/professional/dermatologic-disorders/hair-disorders**](https://www.merckmanuals.com/professional/dermatologic-disorders/hair-disorders) |
| MSK PBL Session 3 |  |
| 8/24/2023 | SESSION 16  RxISCC Discussion:  Skin, soft Tissues and Musculoskeletal Infections | Bacterial Skin Infections  [**https://exchange.scholarrx.com/brick/bacterial-infections-of-the-skin**](https://exchange.scholarrx.com/brick/bacterial-infections-of-the-skin)  [**https://usmle-rx.scholarrx.com/video-player;playlist=233003**](https://usmle-rx.scholarrx.com/video-player;playlist=233003) **(video - 13 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=233003;video=1567**](https://usmle-rx.scholarrx.com/video-player;playlist=233003;video=1567) **(video - 6 mins)**  Leprosy  [**https://exchange.scholarrx.com/brick/leprosy**](https://exchange.scholarrx.com/brick/leprosy)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232948;video=1129**](https://usmle-rx.scholarrx.com/video-player;playlist=232948;video=1129) **(video - 2 mins)**  Bacterial Deep Soft Tissue Infections  [**https://exchange.scholarrx.com/brick/bacterial-infections-of-the-subcutaneous-tissue**](https://exchange.scholarrx.com/brick/bacterial-infections-of-the-subcutaneous-tissue)  [**https://usmle-rx.scholarrx.com/video-player;playlist=230515;video=1890**](https://usmle-rx.scholarrx.com/video-player;playlist=230515;video=1890) **(video - 7 mins)**  Viral Skin Infections  [**https://exchange.scholarrx.com/brick/viral-infections-of-the-skin**](https://exchange.scholarrx.com/brick/viral-infections-of-the-skin)  [**https://usmle-rx.scholarrx.com/video-player;playlist=233015;video=2648**](https://usmle-rx.scholarrx.com/video-player;playlist=233015;video=2648) **(video - 15 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=233015;video=2649**](https://usmle-rx.scholarrx.com/video-player;playlist=233015;video=2649) **(video - 15 mins)**  Fungal Skin Infections  [**https://exchange.scholarrx.com/brick/fungal-infections-of-the-skin**](https://exchange.scholarrx.com/brick/fungal-infections-of-the-skin)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232916;video=1897**](https://usmle-rx.scholarrx.com/video-player;playlist=232916;video=1897) **(video - 5 mins)**  Parasitic Skin Infections  [**https://exchange.scholarrx.com/brick/protozoa-and-ectoparasites**](https://exchange.scholarrx.com/brick/protozoa-and-ectoparasites)  [**https://usmle-rx.scholarrx.com/video-player;video=1901**](https://usmle-rx.scholarrx.com/video-player;video=1901) **(video - 12 mins)**  Scabies And Lice Infestations  [**https://exchange.scholarrx.com/brick/scabies-and-lice**](https://exchange.scholarrx.com/brick/scabies-and-lice)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232977**](https://usmle-rx.scholarrx.com/video-player;playlist=232977) **(video - 7 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232977;video=1188**](https://usmle-rx.scholarrx.com/video-player;playlist=232977;video=1188) **(video - 2 mins)**  Septic Arthritis and Osteomyelitis  [**https://exchange.scholarrx.com/brick/septic-arthritis-and-osteomyelitis**](https://exchange.scholarrx.com/brick/septic-arthritis-and-osteomyelitis)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232982**](https://usmle-rx.scholarrx.com/video-player;playlist=232982) **(video - 4 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232982;video=882**](https://usmle-rx.scholarrx.com/video-player;playlist=232982;video=882) **(video - 1.5 mins)** |
| SESSION 17  RxISCC Discussion:  Traumatic and Mechanical Skin Disorders | Traumatic and mechanical skin disorders  [**https://exchange.scholarrx.com/brick/tissue-repair**](https://exchange.scholarrx.com/brick/tissue-repair)  [**https://www.merckmanuals.com/home/injuries-and-poisoning/burns/chemical-burns**](https://www.merckmanuals.com/home/injuries-and-poisoning/burns/chemical-burns)  [**https://usmle-rx.scholarrx.com/video-player;playlist=233540;video=1940**](https://usmle-rx.scholarrx.com/video-player;playlist=233540;video=1940) **(video - 7 mins)** |
| Self-Study Session | Sessions #18/19 |
| 8/25/2023 | SESSION 18  RxISCC Discussion:  Skin - Acute and Chronic Inflammatory Conditions | Acute Inflammatory Skin Conditions  [**https://exchange.scholarrx.com/brick/acute-inflammatory-skin-disorders**](https://exchange.scholarrx.com/brick/acute-inflammatory-skin-disorders)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232839;video=2780**](https://usmle-rx.scholarrx.com/video-player;playlist=232839;video=2780) **(video - 4 mins)**  Chronic Inflammatory Skin Conditions  [**https://exchange.scholarrx.com/brick/chronic-inflammatory-skin-disorders**](https://exchange.scholarrx.com/brick/chronic-inflammatory-skin-disorders)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232879;video=2423**](https://usmle-rx.scholarrx.com/video-player;playlist=232879;video=2423) **(video 1.5 mins)**  Bullous Disorders  [**https://exchange.scholarrx.com/brick/bullous-skin-disorders**](https://exchange.scholarrx.com/brick/bullous-skin-disorders)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232878;video=2779**](https://usmle-rx.scholarrx.com/video-player;playlist=232878;video=2779) **(video - 9 mins)** |
| SESSION 19  RxISCC Discussion:  Congenital Skin Conditions, Benign, Vascular and Malignant Skin Tumors (Part 1) | Congenital Skin Disorders  [**https://exchange.scholarrx.com/brick/dna-mutation-and-repair**](https://exchange.scholarrx.com/brick/dna-mutation-and-repair)  Benign Skin Masses  [**https://exchange.scholarrx.com/brick/benign-skin-lesions**](https://exchange.scholarrx.com/brick/benign-skin-lesions)  Vascular Skin Lesions  [**https://exchange.scholarrx.com/brick/vascular-tumors-involving-the-skin**](https://exchange.scholarrx.com/brick/vascular-tumors-involving-the-skin)  [**https://usmle-rx.scholarrx.com/video-player;playlist=233011**](https://usmle-rx.scholarrx.com/video-player;playlist=233011) **(video - 12 mins)**  Malignant Skin Masses  [**https://exchange.scholarrx.com/brick/malignant-skin-tumors**](https://exchange.scholarrx.com/brick/malignant-skin-tumors)  [**https://usmle-rx.scholarrx.com/video-player;playlist=232949**](https://usmle-rx.scholarrx.com/video-player;playlist=232949) **(video - 8 mins)**  [**https://usmle-rx.scholarrx.com/video-player;playlist=232848;video=1957**](https://usmle-rx.scholarrx.com/video-player;playlist=232848;video=1957) **(video - 4 mins)** |
| 8/28/2023 | MSK PBL Quiz/ Weekly Quiz #3 & Review |  |
| SESSION 19  RxISCC Discussion:  Congenital Skin Conditions, Benign, Vascular and Malignant Skin Tumors (Part 2) |  |
| MSK Pre-exam Review – Histology/ Pathology |  |
| 8/29/2023 | MSK Pre-exam Review – Anatomy, Clinical and Pharmacology |  |
| Faculty Office Hours |  |
| 8/30/2023 | Anatomy Practical Exam |  |
| 8/31/2023 | Pre-exam Self-Study |  |
| 9/1/2023 | MSK NBME Exam |  |