COMLEX-USA & USMLE
A Comprehensive Guide to Preparing For Your Medical Board Examinations
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Overview

What Is the Purpose of Medical Board Examinations?

First and foremost, the purpose of board examinations is to protect the public from incompetent physicians by assessing a standard minimal level of competence in the knowledge, skills, and attitudes of physicians-in-training.

When Are the Exams Taken?

Both COMLEX and USMLE are exam sequences (COMLEX = 3 Levels; USMLE = 3 Steps), with two levels/steps taken during medical school, and the third taken after graduation, usually at or near the end of the first post-graduate year (PGY-1). MSUCOM requires all students to take COMLEX Level 1 prior to entering the Clerkship, at the end of the 2nd year. Level 2 is then taken, at the student’s discretion, at some point near the end of the 3rd year or early in the 4th year, generally upon completion of the core rotations. COMLEX Levels 1-3 must be taken in sequence and each level must be passed to be eligible to take the next level in the series. In contrast, USMLE Steps 1-3 can be taken out of sequence.

Why Is It Important That You Do Your Best On Your Board Exams?

Passage of COMLEX Level 1, Level 2-CE, and Level 2-PE is a graduation requirement for all MSUCOM students. While a passing score of 400 is all that is required, MSUCOM students are encouraged to aim for above 500 (~50th percentile), preferably much higher, to better position themselves for residency. Furthermore, low scores can pose difficulties down the road. For example, if named in a malpractice suit, during a trial, an attorney for the plaintiff will not hesitate to raise the issue of a defendant’s poor or below average exam scores.

*COMLEX Level 1 and/or USMLE Step 1 scores used to screen residency applicants*

Although the primary intent of board examinations is to protect the public, residency programs are increasingly using board scores to screen applicants. Many residency programs have “cut scores” below which they will not consider an applicant for an interview; therefore, performance on board exams can be a limiting factor in obtaining a desired residency position. The extent to which residency programs utilize board scores varies. To best position oneself to be a competitive candidate, it is important to obtain as high a score as possible. If you take both, you need to get a good score on both.

What Is the Best Predictor of Board Performance?

The best predictor of board exam performance is MSUCOM course performance. Students below the 20th percentile in their overall class rank have a substantially elevated risk for not passing their board exam(s) on the first attempt (Sefcik et al., 2012). This MSUCOM finding is consistent with other published research (Baker et al., 2000; Coumarbatch et al., 2010). *The vast majority of MSUCOM students who fail their board exams are below the 20th percentile in their overall class ranking.*

Bottom line: Doing well in your MSUCOM courses prepares you to do well on your board exams.
Other risk factors for low board exam scores include obtaining a poor or borderline score on the COMSAE Phase 1 (the NBOME practice exam for Level 1); underdeveloped study, time management, and test-taking skills; personality factors that influence learning; excessive test anxiety; and self-perception as a “bad standardized test taker.”

What Are the MSUCOM Policies Regarding COMLEX?

In addition to the graduation requirement, MSUCOM has specific policies regarding eligibility to sit for COMLEX Level 1 (e.g., MSUCOM COMSAE requirement), when COMLEX Level 1 is taken, consequences of failing, and how many attempts are allowed. There are no College policies regarding taking USMLE. For specific policy language, please refer to the appropriate MSUCOM Policy for Retention, Promotion, & Graduation. [http://www.com.msu.edu/Students/Registrar/Policies.htm](http://www.com.msu.edu/Students/Registrar/Policies.htm)

Should MSUCOM Students Take USMLE Step 1?

A growing number of osteopathic medical students are opting to register for the United States Medical Licensure Exam (USMLE), the allopathic equivalent to the COMLEX. In 2017, slightly more than 50% of students in the Class of 2019 sat for USMLE Step 1. First time pass rates on USMLE are similar between osteopathic and allopathic students.

Due to recent trends and changes in graduate medical education, MSUCOM students are encouraged to consider taking the USMLE Step 1, but keeping one’s “options open” requires having a competitive score for one’s desired specialty or residency program. Rather than making a decision based on national trends or the choices of one’s peers, each student must weigh a variety of individual factors, such as academic performance, perceived standardized testing ability, test anxiety, and specialty choice. Just as the College has implemented policies (e.g., mandatory COMSAE with 450 cut score) to minimize the risk of students failing COMLEX Level 1, so too should students self-impose similar standards for USMLE, if they choose to take it. Similar to COMLEX Level 1, MSUCOM course performance is the best predictor of USMLE performance with the risk for failing USMLE Step 1 or achieving an uncompetitive score much higher for students in the lower quintiles. Any student who chooses to take USMLE should plan to take NBME self-assessment exams to gauge readiness.

Other variables to consider when deciding whether or not to sit for USMLE may be more difficult to gauge by the end of the second year and include whether or not (1) you intend to stay in Michigan or (2) your preferred program has a pronounced osteopathic presence (i.e., is D.O. friendly, related to the number of DO students typically accepted into the program).

Ultimately, your decision regarding whether or not to take USMLE involves weighing risks and benefits: relatively straightforward for some but complicated for others.

- Students with a substantially high risk for underperforming are those who have low class rank (especially bottom quintile), low first-time MCAT score, and high level of test anxiety.
- Students least likely to need to take USMLE are those who plan to stay in Michigan and are interested in family medicine.
• Students who more likely need to take USMLE are those pursing residency spots in programs that have always been ACGME accredited, especially those that are competitive and do not have a strong D.O. presence.

You can use the FREIDA Online® database to research program requirements for board exams. If COMLEX is not listed, they may not accept it; however, it is always prudent to double-check with the program directly to ensure that you have the most up-to-date information. If your preferred program requires a USMLE score to be considered for an interview, but you are at high risk for underperforming on the exam, discuss your options with an academic/career advisor. And always, if in doubt, talk to an academic/career advisor.

If you opt to take USMLE, the good news is that the study strategies and most of the resources used to prepare for the USMLE Step 1 are the same as those used to prepare for COMLEX Level 1.

United States Medical Licensing Examination (USMLE) http://usmle.org
National Board of Medical Examiners (NBME) www.nbme.org
FAQ on scores: http://www.usmle.org/frequently-asked-questions/#scores

COMLEX Level 1
Description of the Exam
A thorough description of the exam can be found in the NBOME COMLEX-USA Bulletin of Information http://www.nbome.org/Content/Flipbooks/ComlexBOI/index.html

Other recommended resources:
COMLEX-USA FAQs: https://www.nbome.org/exams-assessments/exam-faqs/
Video – Prometric: What to expect on test day: https://www.nbome.org/resources/what-to-expect-on-test-day-examinations-at-prometric/
COMLEX Practice Exam (use to gain familiarity with the computer-based testing): https://www.nbome.org/PracticeExams/COMLEX-USA/Level1/index.htm

Scoring
According to NBOME, exam results become available approximately 4 to 6 weeks after the exam date. Students will be notified by email that their score reports are accessible through their NBOME account. Three-digit standard scores for COMLEX Level 1 are reported with a mean of approximately 520 and a minimal passing score of 400. Additional information on Scoring can be found by following this link: https://www.nbome.org/exams-assessments/exam-faqs/

Test blueprint
Students are strongly encouraged to become familiar with the test blueprints published by NBOME. Knowing what is expected of you is an important step toward adequate preparation. Blueprint information that can be found by following these links:
• Before September 2018: https://www.nbome.org/includes/comlex-outline-tables/
What Resources Are Available for Board Exam Preparation?

There are too many COMLEX and USMLE resources for any one person to utilize; don’t feel compelled to collect them all. Instead explore what’s available and select those that cover the topics you need to review in a way that grabs your attention. Listen to others’ recommendations, but base your decisions on factors relevant to you, such as your learning style preferences (visual, verbal/written words, auditory) and weak content areas, etc. If a respected peer recommends some great pathology lectures, but you are not a good auditory learner, then that may not be the best resource for you. Attempting to study from too many sources can lead to bouncing around, lack of focus, and important topics falling through the cracks.

Commercial review courses: pros and cons

Will you be better served by taking a commercial review course or by independent study? The “pros” of self-study are that it’s cheaper, flexible, and more likely to reflect your own “style.” The “cons” are more complicated. For example, your own learning style may be sub-optimal when preparing for board exams. One good clue—how was your academic performance during the first two years of medical school?

If your academic record reflects inconsistent or below average performance, multiple failed course exams or failed courses, average exam scores below 85%, or an overall class rank below the 20th percentile and if you tend to be disorganized, have a hard time sticking to a schedule, or procrastinate, then a commercial review course may be a viable option. On the other hand, if you are an organized, disciplined student who has earned strong grades, then independent study is more likely to be a good fit.

If you are leaning toward a commercial review course, take your time to select the right one. Some programs are fairly rigid in terms of when you can or cannot finish things; while other programs allow you work at your own pace, i.e., do more when you have time and do less when you are busy. Also, be aware that the best outcomes come from programs that devote some time to teaching test-taking skills. Evaluate carefully all programs and their features, and beware of scare tactics (e.g., if you buy today, you’ll get this price, but if you wait until tomorrow, the price will double).

- Kaplan Test Prep (provided by MSUCOM free-of-charge to all students for Level 1) [http://www.kaptest.com/Medical-Licensing/COMLEX/comlex-high-yield.html](http://www.kaptest.com/Medical-Licensing/COMLEX/comlex-high-yield.html)
- Doctors in Training (DIT) [http://www.doctorsintraining.com](http://www.doctorsintraining.com)
- Northwestern Medical Review [http://northwesternmedicalreview.com](http://northwesternmedicalreview.com)

Review books

Any/all review books for COMLEX Level 1 and USMLE Step 1 are potential candidates, and there are many to choose from. To reiterate a previous point, you need to select review books, or other resources such as flashcards, multimedia, etc., that work for you. Ask around and explore before you buy.
• First Aid for USMLE Step 1 – chock full of facts and mnemonics, **but** encourages rote memorization – should be supplemented (not a stand-alone resource)
• Kaplan MedEssentials – this is a First Aid competitor; explore both and pick the one that is more appealing to you
• USMLE Step 1 Secrets – case-based (clinical vignettes with Q&A) review
• First Aid Cases for the USMLE Step 1 – case-based (clinical vignettes with Q&A) review
• Rapid Review Series – basic science discipline reviews
• BRS (Board Review Series) – basic science discipline reviews
• Clinical Microbiology Made Ridiculously Simple
• Lippincott’s Illustrated Reviews – pharmacology, microbiology, biochemistry
• OMT Review by Savarese – the gold standard OMM review book (“the green book”)
• Pathoma – Fundamentals of Pathology – [www.pathoma.com](http://www.pathoma.com)

Question banks (Q-banks)

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<tr>
<th><strong>KAPLAN</strong></th>
<th><strong>usmleRx</strong></th>
<th><strong>USMLEWORLD</strong></th>
<th><strong>COMBANK</strong></th>
<th><strong>COMQUEST</strong></th>
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| **Provided by MSUCOM for each student** | **Companion to First Aid with explanations that tie directly to facts in First Aid for the USMLE Step 1** | **Assesses student’s basic science knowledge with 2000+ high-quality, unrepeated multiple-choice board-type questions** | **Assess strengths and weaknesses with analytics** | **Targeted question bank authored/edited exclusively by licensed osteopathic physicians** |
| **COMLEX and USMLE Qbanks** | **2500+ USMLE-style questions written by high-scoring students** | **Detailed explanation and educational objective for each question with easy to read illustrations and charts** | **Active learning methods to develop problem-solving skills** | **Medical jurisprudence issues written by medical law and ethics experts** |
| **5000+ questions including High-Yield workbook with answers** | **Tests are customizable by difficulty, general principles, and systems** | **Board simulated interface software features (highlight, strike-out annotation, searchable lab values, calculator, mark/flag items etc.)** | **Additional OMM** | **High-yield OMT topics written exclusively for COMLEX preparation** |
| **Video lecture series including OMM** | **Both tutorial and timed testing modes** | **Suspend and resume a test at any time at your convenience with 24-hour account web access** | **Learn to think like a test-writer** | **Customizable program menu - reinforce your learning in the right places** |
| **1 Diagnostic Exam used to create a detailed study plan** | **Detailed performance feedback** | **External references to medical journal abstracts** |  |  |
- Premium-quality COMLEX programs endorsed nationwide by osteopathic medical school administrators
Recommended approach to selecting resources

1. Select either First Aid OR MedEssentials for quick reference and high-yield facts, and
2. Select either USMLE Secrets OR First Aid Cases for a case-based presentation of information, and
3. Select a more detailed basic science review resource for your weakest subjects and/or Pathology, Physiology, Pharmacology, and Microbiology, and
4. Select an OMM/OMT review resource, and
5. Select one or two Q-banks, including **at least one COMLEX Q-bank**

### Phases of Board Prep

<table>
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<th>PHASE 1</th>
<th>PHASE 2</th>
<th>PHASE 3</th>
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<tr>
<td>During courses: Semesters 1 - 6</td>
<td>After courses &amp; before COMSAE: April-May of 2nd year</td>
<td>After COMSAE &amp; before exam dates: May-July of 2nd year</td>
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<tr>
<td>Objective: Acquire knowledge base &amp; develop skills (e.g., deep learning strategies); goal: exam average &gt;85%</td>
<td>Objective: Review knowledge base &amp; practice skills (e.g., application of knowledge)</td>
<td>Objective: Refine knowledge base &amp; hone skills (e.g., clinical reasoning, stamina)</td>
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<tr>
<td>Focus: Coursework</td>
<td>Focus: Prep for mandatory COMSAE</td>
<td>Focus: Intensive review</td>
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<tr>
<td>Select board prep resources</td>
<td>ID &amp; fill major knowledge gaps using Kaplan simulated exam &amp; High-Yield Review Course or other resources</td>
<td>Complete practice Qs to ID common thinking errors &amp; fill remaining knowledge gaps</td>
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<td>Draft board prep plan</td>
<td>Complete <strong>20-50 COMLEX-style Qs/day</strong>; review explanations</td>
<td>Complete <strong>50-100 Qs/day</strong>; review explanations for incorrect answers &amp; correct guesses</td>
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<td>Supplement coursework with board prep resources</td>
<td>Self-reflect to ID &amp; mitigate barriers, e.g., anxiety, ineffective or inefficient learning strategies, low reading comprehension, procrastination, etc.</td>
<td>At least 1x/week, complete 3-6 back-to-back blocks of 50 Qs (150-300 total) using timed format and mixed questions (all subjects)</td>
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*Avoid USMLE-style Qs during Phase 2 to increase likelihood of achieving 450 cut score on COMSAE*

**If taking USMLE, complete both USMLE-style (e.g., Uworld) and COMLEX-style (e.g., COMBANK) Qs during Phase 3**
Semester-By-Semester Timeline for Board Exam Preparation

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<th>Recommendations</th>
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| Semesters 1 & 2     | ✓ Focus on your coursework  
                          ✓ Actively seek to improve studying / learning, time management & test-taking skills |
| Semesters 3 – 5     | ✓ Focus on your coursework  
                          ✓ Continue to hone your studying / learning, time management & test-taking skills  
                          ✓ Get organized  
                          ✓ Select and purchase board prep resources  
                          ✓ Familiarize yourself with the COMLEX format and test blueprint  
                          ✓ Incorporate board review materials and practice questions into your course study:  
                          e.g., Kaplan, SketchyMedical, First Aid, usmleRx, and/or Pathoma |
| Semester 6          | ✓ Focus on your coursework  
                          ✓ Meet with an Academic Advisor  
                          ✓ Schedule your test date(s)  
                          ✓ Develop a study schedule |
| Semester 7          | ✓ Prepare for and take COMSAE  
                          ✓ Follow your study schedule; adjust as needed |

When Should You Take COMLEX Level 1?

COMLEX Level 1 **must** be taken prior to entering the Clerkship rotations. Most students opt to take the exam during the **latter half of June**, following completion of the 2nd year coursework. Students are eligible to take it anytime from the end of May through July, as long as it is taken prior to starting in the Base Hospital. Students are advised against taking it too early to “get it over with.” It is important to be as prepared as possible to minimize the risk of not passing on the first attempt.

MSUCOM requires all students to take and obtain a score of 450 or higher on an embargoed version of COMSAE in order to be allowed to sit for COMLEX Level 1. Please refer to the appropriate MSUCOM Policy for Retention, Promotion, & Graduation. [http://www.com.msu.edu/Students/Registrar/Policies.htm](http://www.com.msu.edu/Students/Registrar/Policies.htm)
How Should You Prepare for COMLEX Level 1 and USMLE Step 1?

Preparing for your board exams is project management 101. Getting ready for the exam is a temporary endeavor that is bounded in time – it has a beginning and an end date. Successful preparation includes:

1. Determining needs (e.g., what skills need to be developed?, what content needs to be learned?),
2. Setting SMART goals,
3. Making realistic plans that are likely to achieve goals
4. Identifying and managing resources,
5. Anticipating and mitigating obstacles,
6. Creating a realistic timeline with checkpoints,
7. Performing activities/tasks necessary to achieve the goals (e.g., studying material, doing practice questions),
8. Evaluating progress toward the goal (e.g., taking practice tests),
9. Making adjustments to the plan as needed, and
10. Maintaining motivation and commitment to the desired outcome (e.g., achieving a score over 500).

Avoid common mistakes when preparing for Level 1

- **UNFAMILIARITY** with exam format, content, and expectations
  - Read the COMLEX Bulletin of Information and FAQs and be familiar with the blueprint
- **PASSIVE** study methods
  - Develop active learning methods
- **INSUFFICIENT** practice with board-style questions
  - Begin doing board-style questions while still completing coursework; increase number of questions over time; don’t wait until you feel like you “know enough”
- **MEMORIZING** as opposed to understanding the material
  - Incorporate deep learning strategies
- **MISREADING** or misinterpreting questions
  - Read carefully and analyze your performance on practice questions; ask yourself, “what led me to choose the wrong answer?”
- **INADEQUATE** test day strategies
  - Become test wise; make sure you employ strategies that are beneficial to your overall performance

Self-assessment

Self-assessment is an important early step to successful preparation (obtaining a performance baseline), serving three useful purposes:

1. It will help you determine your study priorities (i.e., identify needs). By comparing your baseline assessment with the COMLEX Blueprint you can ensure that you spend an adequate amount of time on the “right” material.
2. It will help you identify needed resources, such as purchasing review books that cover specific “weak” content areas (e.g., microbiology, pathology, or pharmacology).
Determining your baseline performance will allow you to better gauge whether or not your study plan is working. You should see an improvement in performance over time. This will allow you to make a more objective determination of progress.

**COMSAE-Phase 1**

COMSAE stands for Comprehensive Osteopathic Medical Self-Assessment Examination. These practice tests are provided by the National Board of Osteopathic Medical Examiners (NBOME) for use by students to gauge their knowledge and problem-solving skills and develop familiarity with the COMLEX format to aid in preparation for the real thing. Question banks, such as USMLE-Rx, USMLE World, COMBANK, or COMQUEST can also be used to self-assess baseline performance and progress over time.

The advantages of using COMSAE are (1) the makers of COMLEX developed it, (2) it represents a style and format that is very similar to the current version of COMLEX, and (3) the scores are reported in the same way as COMLEX. Disadvantages include limited feedback, cannot review missed questions, cost per version, and a limited number of different versions. Multiple versions are available for purchase at a cost of $60 each. COMSAE Phase 1, like COMLEX Level 1, emphasizes scientific understanding. [https://www.nbome.org/exams-assessments/comsae/registration-scheduling/student-purchases/](https://www.nbome.org/exams-assessments/comsae/registration-scheduling/student-purchases/)

**Interpreting your results**

Your COMSAE results (performance profile) will include a 3-digit score and a rating of your performance (poor, borderline, acceptable, good) in areas related to: Dimension 1: Patient Presentation and Dimension 2: Physician Task. Sample performance profile: [https://www.nbome.org/exams-assessments/comsae/scores-transcripts/score-reporting/](https://www.nbome.org/exams-assessments/comsae/scores-transcripts/score-reporting/)

- Poor performance = score lower than 350
- Borderline performance = score 351 – 450
- Acceptable performance = score 451 – 550
- Good performance = score higher than 550

**Using your results to guide your review**

Whether you use your COMSAE score to obtain your baseline performance or take a version of COMSAE closer to your actual test date, you can use the results to help guide your review.

- Look at the Test Blueprint and compare your performance in each area with its relative weight on the Level 1 exam (% of questions).
- If your score is “poor” or “borderline” in areas with high percentages of Qs (such as “Patients with Presentations Related to Cognition, Behavior, Sensory and Central Nervous Systems, Substance Abuse, Visceral and Sensory Pain 28-38”), consider these HIGH PRIORITY items for your review.
- Because the majority (70-85%) of COMLEX Qs test your knowledge of scientific mechanisms, if your score is “Poor” or “Borderline” in any basic science discipline (anatomy, physiology, biochemistry, microbiology, pathology, pharmacology, behavioral science, OMM/OPP), review that discipline thoroughly.

**NBME Self-Assessment Services for USMLE:**

[http://www.nbme.org/students/sas/Comprehensive.html](http://www.nbme.org/students/sas/Comprehensive.html)

Creating a study schedule
A critical step in successful preparation is creating a realistic and detailed study schedule. Make a study schedule and stick to it, but also revise as necessary if the plan does not seem to be working, for example, if your scores on practice tests do not seem to be increasing over time or if you are unable to maintain the pace that you set for yourself. Sample study schedules are available on the website for the Office of Academic and Career Guidance: http://com.msu.edu/Students/Boards_and_Prep/Index.htm.

Studying for Boards
The key to mastering the material ultimately lies with being able to recognize and understand pertinent information, recall related information in order to make the correct inferences, and also, and perhaps most importantly, appropriately apply the information to answer the specific questions posed on the exam.

- Begin by using deep learning approaches as you study for your course exams – avoid “cram and dump” study methods that emphasize memorization. Remember, preclinical academic performance is the best predictor of COMLEX Level 1 performance.
- Develop problem-solving and critical thinking skills alongside your content knowledge. COMLEX requires you to understand underlying principles and concepts so you can utilize your analytical skills to reason through the questions. COMLEX questions have a reputation for being more “vague” than USMLE. The most reasonable interpretation of this observation is that, for every COMLEX question, while there may be several plausible answers, there is only one best answer. Context is as important as content.
- First Aid/MedEssentials, SketchyMedical, and Pathoma are resources used for board prep that can be incorporated into your study routine during your coursework. Many students annotate First Aid with course-based information, thereby creating a customized board exam study aid.
- As you advance through your courses, you can also supplement your course materials with Q-bank questions (e.g., Kaplan). This will not only begin to build familiarity with board style questions, but also many students find it a useful approach to master course content. Top priority, however, is to focus on the content that is presented in the course. If you are struggling to stay caught up and learn what’s in the lectures and course pack, do not be distracted by spending your limited time on board review materials.
- Study smarter, not longer. The quality of your study time is more important than the quantity. Passively reading and re-reading is much less effective than time spent in active study.
  - Explain concepts out loud to a study partner or to an empty room.
  - Create concept maps that center on a clinical presentation.
  - Do practice questions to practice applying the materials as opposed to just memorizing it. Make sure you can explain why the right answers are right and the wrong answers are wrong. For wrong answers, try to determine what led you to the wrong answer.
  - If there are other study methods that work for you, use them – there’s no one right way – but, don’t simply try to memorize facts.
Test-taking tips

- Develop your multiple-choice test-taking skills. Learn how to approach multiple-choice questions and get lots of PRACTICE. Some people seem to instinctively know how to answer multiple-choice questions correctly while others struggle. You can learn the skills to improve your test performance: [http://com.msu.edu/Students/Academic_Guidance/testing_smart.pdf](http://com.msu.edu/Students/Academic_Guidance/testing_smart.pdf)
- Don’t make the mistake of avoiding practice questions until you “feel” prepared. Now is not the time for performance anxiety. Getting questions wrong will help you learn, especially if you pay attention to what you got wrong and why you got it wrong.
- Know how to approach vignette styled multiple choice questions:
  - **ASSEMBLE** key clues into a mental “snapshot” of the patient’s situation and status.
  - **DETERMINE** precisely what is being asked.
  - **TAKE** time to think, recall, and anticipate possible answers.
  - **COMPARE** your anticipated answer to the available options.
  - **MARK** the option(s) that best match.
  - **RULE OUT** options that don’t account for all findings in the question stem.
  - **SELECT** the best answer.
- Low performers on multiple-choice tests often focus on the answer choices rather than on the stem of the question. This is a very inefficient approach and one that tends to result in more mistakes. The answer is in the stem – read it carefully.

Student comments about COMLEX preparation

- Time Management is important! Utilize your time better.
- “Look at very last line of the question stem, which is where the actual question is. By doing so, you can begin guiding your mind down whichever path the question takes (i.e. diagnosis, drug of choice, adverse effects, etc.”
- “First time through, I did not spend enough time learning how to apply material to the COMLEX questions. Second time around, I focused more on questions, which allowed me to actually apply the material as opposed to just memorizing.”
- Notice what questions you get wrong, and then study that material and repeat those questions. It is important to know not only why the correct answer was correct, but why the others were wrong.
- “Study to learn, not for the test.”

Keep Anxiety at Bay

It is quite normal to be anxious about taking COMLEX; it is, after all, a high stakes, gateway exam. But, passing the exam is achievable for all medical students. That said, if your “fight or flight” response is not allowing you to focus on preparation, then you will need to confront your anxiety and seek help.

For personal counseling assistance, please contact the MSUCOM Office of Personal Counseling: [http://www.com.msu.edu/Students/PC_HP_New/Personal_Counseling_Home_Page.htm](http://www.com.msu.edu/Students/PC_HP_New/Personal_Counseling_Home_Page.htm)

Take Care of Yourself While Preparing

Now is not the time to give up on self-care, quite the contrary, COMLEX preparation is the perfect time to develop or maintain healthy habits. Eating a balanced diet, exercising, and sleeping are not only good for you, they can also reduce stress and help you learn and retain information. In addition, maintaining relationships with family and friends is important during this stressful time – you will need a good support network. The key is incorporating these things into your study schedule – actually block out periods of time for meals, for exercise, for socializing, and for sleep.

What Should You Do if You Fail COMLEX Level 1?

You are not alone! If you fail Level 1, give yourself time to cope with the news and grieve a little, then regroup and plan to try again. Tell your trusted family and friends what happened so you can garner support – don’t keep it to yourself, eventually you’ll have to come clean and the longer you wait, the harder it will be. Importantly, contact the Office of Academic and Career Guidance for help. Advisors will be able to talk through your situation, help you figure out what went wrong, and work with you to develop a new game plan to be successful on your next attempt. There are many MSUCOM resources available so please seek help.

If you are experiencing despair, depression, sadness, and/or are struggling to cope, seek personal counseling: http://www.com.msu.edu/Students/PC_HP_New/Personal_Counseling_Home_Page.htm

Instructions if you fail COMLEX: http://com.msu.edu/Students/Academic_Guidance/COMLEX_retake_Chart.pdf

Where do I go and who do I talk to when I fail my boards?

<table>
<thead>
<tr>
<th>COMLEX 1/USMLE STEP 1</th>
<th>COMLEX 2 CE / USMLE 2CK</th>
<th>COMLEX 2PE / USMLE 2CS</th>
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</thead>
<tbody>
<tr>
<td><strong>Your Academic And Career Guidance Advisor:</strong></td>
<td><strong>Susan Enright</strong>, DO, Academic Programs <a href="mailto:Susan.enright@hc.msu.edu">Susan.enright@hc.msu.edu</a></td>
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<tr>
<td>● Kim Peck MBA, Director</td>
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<td>● Dawn Dewar, M. Ed</td>
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<td>Mangala Sadasivan, PhD, Director PEAK Program</td>
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<td>517-353-4363, <a href="mailto:Mangala.Sadasivan@hc.msu.edu">Mangala.Sadasivan@hc.msu.edu</a></td>
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COMLEX Level 1 FAQ

*Are testing accommodations available for COMLEX?*

Yes, requests must be made directly to the NBOME following the procedure described here: https://www.nbome.org/Content/Exams/COMLEX-USA/COMLEX-USA_Test_Accommodation_Instructions.pdf.
How do I know if I am ready to take the exam?

**Readiness to sit for the exam can be gauged by taking a version of the COMSAE.** The College requires each student to obtain a score of 450 or higher on an embargued version of COMSAE before being allowed to sit for COMLEX Level 1. NBOME considers a score of 450 to be on the cusp between borderline and acceptable performance. At MSUCOM, requiring a COMSAE score of 450 or higher has greatly reduced, though not eliminated, the number of failures on COMLEX Level 1. In other words, receiving 450 or higher on COMSAE does not guarantee a passing score on COMLEX. To further minimize risk of a failing or low score, a student should aim for a much higher score on COMSAE. In addition to one’s COMSAE score, there should be other indicators of readiness, such as, confidence in one’s ability to pass and consistently good performance on Q-bank questions and practice tests.

How much time should I spend studying?

Though research has failed to demonstrate a clear relationship between total study time and academic performance, (Plant et al., 2005), the range of COMLEX scores has been reported to increase as one moves from less study time to more study time (Sefcik et al., 2012). One likely interpretation is that some students study a lot but ineffectively, while others see a large positive impact on their test score from time spent studying (Sefcik, 2014, personal communication). In other words, it’s quality, not quantity that counts and there is no magical “right” number of hours. Depending on a variety of factors, such as effectiveness of study methods, baseline knowledge/performance, etc., to become truly proficient with the volume of material covered on the exam, plan to study at least 8 hours per day, 6 days per week, for 4-8 weeks and adjust up or down, based on whether or not you are able to stick to your plan and are making adequate progress. Allow enough time to prepare, but not so much that you get burned out (become apathetic). Many students who have taken longer than 6 weeks, later said they took too much time and lost ground toward the end of their studying.

Should I do random (mixed) sets of practice questions or questions that all come from the same subject area (discipline or system)?

The answer is both (see FAQ below—what is the best way to use my Q-bank?). Completing questions from a single subject area can be helpful, especially if used as a post-test after you’ve reviewed the related material. However, the real exam is a random mix of questions—you won’t know what type of question is next. If you know that all the questions are going to be about physiology or will all cover the cardiovascular system you’ve already narrowed your focus—your brain is primed to think about things in a certain way. When these context clues are gone, as they are on the real exam, things get more challenging because you are completely reliant on each stand-alone question to provide the cues and clues you need to answer the question. The random nature of the exam adds another layer of stress, but one that you can prepare for. Like everything else in life, the more you practice, the better, and more used to it, you become.

Should I join a formal prep program or go it alone?

This is a very personal decision. See previous discussion of pros and cons of commercial board prep courses.
What is the best way to use my Q-bank?

Excellent question! There are many ways to approach practice questions. You should consider using all of them as you prepare. The main reasons to do practice questions are: (1) To learn content, (2) To identify weak areas for further review, (3) To monitor progress, (4) To develop test-taking skills, and (5) To develop test-taking endurance and stamina.

(1) To learn content. This is often done by using the “tutorial” function of the Q-bank software. Blocks of questions can be discipline- or system-based or mixed.

(2) To ID weak areas. As you complete questions, especially those answered incorrectly, make note of problem areas. Most Q-banks are capable of generating a performance breakdown as well.

(3) To monitor progress. Taking “practice exams” on a regular basis can help you to determine if you are improving over time. In turn, this information will allow you to evaluate your study strategy and methods—is what you are doing working or might you need to make adjustments? To be as accurate as possible, you should take these practice exams under simulated testing conditions (timed at about 1 minute per question, closed book “no peeking”, and a RANDOM mix of questions from all subjects) and you must try to keep these conditions the same each time you take a practice exam.

(4) To develop test-taking skills. Like any other skill-set, improving your test-taking ability takes deliberate practice. So, in addition to identifying your weak content areas, you should also analyze your performance in terms of how you approach questions. Do you tend to overthink/read too much into the question? Do you second-guess yourself? Do you read too quickly or skim and miss important details? Do you jump to premature conclusions before you’ve read the entire question? Do you focus too much on the answer options and all but ignore the question stem? It is particularly important for you to pick apart questions you got wrong when you were very confident in your answer selection, as this suggests a test-taking “process” or cognitive error as opposed to a simple lack of content knowledge.

(5) To develop endurance and stamina. An 8-hour exam is exhausting and people react differently. Some crash during the afternoon session, but this can potentially be mitigated by eating the right kind of lunch, such as foods that provide sustained energy as opposed to a quick burst followed by a crash. Just as a marathon runner gradually builds up to his target mileage, as a test-taker, you need to gradually increase the number of questions and time of your practice tests, culminating about 10-14 days before your test date with a “mock” 6- to 8-hour exam day. Pay attention to your body—When do you get sleepy? How might you use this information on test day to improve your performance? What foods should you eat? How much water should you drink? Should you bring medication for headaches? Keep in mind that just as marathoners stop distance running a couple weeks prior to a marathon, you must not take long a practice exam within a week of your test date or you may be too fatigued on test day.

Also, remember, you will never see any of these practice questions again on the real test. There is no value in repeating the same questions over and over again, which mainly promotes memorization of those specific questions. Instead, keep in mind that anything that seems unfamiliar in a practice question – whether it is information provided in a question stem or in any of the foils – is something you may need to know to answer a different question on the real exam, so review it, learn it, remember it.
What should I do if I don’t feel prepared to take the exam?
Because you are required to take COMLEX Level 1 prior to entering your Clerkship rotations, a potential consequence of postponing your test date is that you may need to take an extended leave of absence from the College. If you truly feel unable to sit for the exam, you should contact the Associate Dean of Student Services or your Academic Advisor in the Office of Academic and Career Guidance to discuss your options.

Are Licensure Requirements Different for Canadian Students?
Possibly, depending on one’s career goals. For more information please refer to the Canadian Student Resource Guide:

If you have questions, please contact:
- Ms. Kim Peck MBA, Director of Academic and Career Guidance; 517-884-4037; kim.peck@hc.msu.edu

Additional resources to guide your preparation

The 2016 Student Guide to Strategic Performance on COMLEX-USA
This guide, written by the co-founder of COMBANK, provides excellent information on learning and self-awareness, and explains COMLEX and the three types of questions the exam utilizes. https://truelearn.com/blog/2016-student-guide-to-strategic-performance/

How to Study for Standardized Tests by Sefcik, Bice, & Prerost (2013)
http://www.amazon.com/Study-Standardized-Tests-Donald-Sefcik/dp/076377362X/ref=sr_1_1?s=books&ie=UTF8&qid=1408453716&sr=1-1&keywords=how+to+study+for+standardized+tests

A Resource for USMLE Step 1 Preparation
Though written for USMLE, this guide contains useful information that also applies to COMLEX preparation. http://www.com.msu.edu/Students/PDF/Student_Test_Preparation.pdf

Planning a Study Schedule
Practical information for preparing a board review schedule.

Glossary of Osteopathic Terminology

Picmonic
A website for audiovisual learning to help students master and retain critical information.
http://picmonic.com

SketchyMedical
A visual learning tool for pharmacology, microbiology, and pathology.
https://www.sketchymedical.com/
COMLEX Level 2-CE
Description of the Exam

Much of the information provided about preparing for COMLEX Level 1 is also applicable to the Level 2 Cognitive Evaluation (CE). For a complete description of the exam, please visit:

Test blueprint
Adequate preparation should begin with an understanding of what you will be tested on. As with Level 1, students should become familiar with the test blueprint:

When Should You Take COMLEX Level 2-CE?

MSUCOM does not mandate a date by which students must take COMLEX Level 2; however, passing Level 2-CE and PE is a graduation requirement. Most students take the exams at some point between April of their 3rd year and August of their 4th year. Because of its clinical emphasis, it is wise to complete as many core rotations as possible prior to sitting for the exam. Students find they feel most prepared to take Level 2-CE while these subjects are still relatively fresh in their minds.

Many students take their Level 2 exams before interview season (fall/winter of year 4) begins to allow for a more flexible travel schedule, and some residency programs require applicants to have a Level 2-CE score posted in order to be considered for an interview. Furthermore, some programs begin to rank applicants in late fall or early winter, and applicants who have not yet obtained passing scores on COMLEX 2-CE and PE may not be considered for ranking. This is because completion of these exams is required for graduation, licensure, and starting residency on time. Be sure to research program requirements so you can time your exam appropriately.

The decision regarding when to take the Level 2 exams needs to be made thoughtfully and by carefully evaluating one’s circumstances. Though students may want to consider taking Level 2-CE and PE earlier out of concern for not being able to match if they don’t have a passing score, this must be balanced against the risk of poor performance or failing if taken too soon. Rushing to take Level 2 out of fear, and consequently failing one or both exams due to inadequate preparation, does not improve one’s likelihood of matching. Students with low Level 1 scores may wish to take Level 2-CE earlier, hoping to demonstrate an improved score on their application, and some mistakenly believe that if they fail Level 1 they are likely to do better on Level 2 because “it is more clinical.” To the contrary, MSUCOM students who obtain a below average or failing score on Level 1 are at a significantly higher risk for failing Level 2-CE. Any student who is in this situation should discuss their COMLEX Level 2 preparation plan with an academic advisor.
How Should You Prepare for Level 2-CE?

Preparation for Level 2-CE begins with your first rotation, just as preparation for Level 1 began with Anatomy in the first semester. Be as engaged as possible in all rotations, regardless of your level of interest in that specialty, try to learn as much as possible from patient encounters and from the attending physicians, residents, and other medical students with whom you interact. Try to read a little every day about the cases you’ve seen, and study in earnest for the COMAT exams.

As with Level 1, it is useful to gauge your baseline performance, either by taking a version of COMSAE Phase 2 or by creating a practice test using your Q-bank of choice. It is also important to be familiar with the test blueprint, create a study schedule, identify key resources, do practice questions, and assess your progress with practice tests. Many students use vacation time to take a week or two off right before the exam for an intensive review, but a great deal of studying must be done while you are on rotation.

While not essential, it is highly advisable to have completed all primary care discipline rotations (FM/IM/Peds/ OBGYN), including the IM and FM sub-internships, prior to taking COMLEX 2 CE to maximize exposure to relevant topics.

Use COMSAE Phase 2 to gauge readiness for COMLEX Level 2 CE. Refer to pages 7-13 of this document for additional advice.

Recommended resources for Level 2-CE

With the exception of OMM and COMLEX specific Q-banks, most of the resources for COMLEX Level 2 CE are the same as those used to prepare for USMLE Step 2 CK.

Review books:
- First Aid for USMLE Step 2 CK
- Master the Boards: Step 2 CK
- Case Files series
- OMT Review by Savarese – the gold standard OMM review book (“the green book”)

Q-banks:
- USMLEWorld: [www.usmleworld.com](http://www.usmleworld.com)
- COMBANK: [www.combankmed.com](http://www.combankmed.com)
- COMQUEST: [www.comquestmed.com](http://www.comquestmed.com)

COMSAE: [https://www.nbome.org/exams-assessments/comsae/](https://www.nbome.org/exams-assessments/comsae/)

For a more detailed discussion of what you need-to-know from references often used by C2CE item-writers:
- Harrison’s Principles of Internal Medicine
- Schwartz’s Principles of Surgery
- Tintinalli’s Emergency Medicine
- Nelson Textbook of Pediatrics
For a broad overview of relevant legal and ethical concepts and practice questions:


**What Should You Do if You Fail?**

Contact an Advisor in the Office of Academic and Career Guidance:


Or Mangala Sadasivan, PhD, Director PEAK Program, 517-353-4363,
mangala.sadasivan@hc.msu.edu

**COMLEX Level 2-PE**

**Description of the Exam**

For a thorough description of COMLEX Level 2 PE and additional important resources, including eSOAP notes resources, instructional videos, and an orientation guide, please follow this link:


**How Is the COMLEX Level 2-PE Graded?**

Students must pass both the biomedical/biomechanical and the humanistic domains to pass Level 2-PE. There are three graded components that contribute to the overall score:

1. The vast majority of the score is based on the SP evaluation; their perspective as the patient is key.
2. SOAP note documentation, which is graded by DOs, and
3. OMT skills, which is graded by OMM-raters (DO physicians trained to evaluate OMT skills).


**Why Do Students Fail the COMLEX Level 2-PE?**

Unsuccessful students typically: (1) lack insight into how they will be graded – namely by the SPs, (2) do not understand that the exam is about process, not content, and/or (3) rely almost exclusively on using a PE board review book to prepare. Whatever the reason, the net result is that most students fail because they do not perform a patient-centered history and physical – e.g., they don’t look at the patient, their body language is closed off, they fail to develop rapport, they don’t convey empathy – and the SPs (rightly) assign a low score. A student will not fail simply because s/he forgot bits and pieces of the physical exam or failed to ask an appropriate history question during one or two of the encounters; however, repeatedly committing the same error(s) is obviously much more significant. It is worth noting that students rarely demonstrate gross deficits in the biomedical / biomechanical domain, yet this is often the focus of exam preparation.
Failure is a “Red Flag”
Take this exam very seriously! Failure of this portion of the COMLEX is a “red flag” to residency program directors, even if scores on the cognitive exams are good (i.e., COMLEX Level 1 and Level 2-CE). Although you should do everything in your power to not fail the exam, at the same time, you mustn’t be intimidated. This exam evaluates skills you practice and hone every time you interact with a patient. While on your rotations, be observant of how your preceptors treat patients and how patients respond to your preceptors – if you believe that what they do is not “right,” that their DPR skills seem far from ideal, and/or that patients do not seem to respond well, then do not emulate them. “But that’s how my preceptor does it” is not a valid excuse for poor performance.

What successful students do
- Spend time on the NBOME web site and read the Orientation Guide prior to the exam.
- Wash their hands at the beginning of each encounter.
- Place the stethoscope directly on the patient’s skin, not over the gown.
- Lay the patient down to do an abdominal exam.
- And demonstrate the osteopathic principles of patient-centered care at all times.

When Should You Take Level 2-PE?
Many students want to take Level 2-PE well before the end of their 3rd year; however, this desire must be balanced against the negative consequences of failing. It is important to thoroughly prepare. Plan to take the PE after your core rotations, particularly after you have completed EM, FM, and IM as these rotations provide practice with a variety of patients/patient presentations. Check with the residency programs to which you are applying to learn if they require you to have taken (and passed) the exam to be considered for an interview. Also, as noted previously, some programs begin to rank applicants in late fall or early winter, and applicants who have not yet obtained passing scores on COMLEX 2-CE and PE may not be considered for ranking. This is because completion of these exams is required for graduation, licensure, and starting residency on time. Schedule the PE for the earliest available date that enables you to fully prepare.

How Should You Prepare for Level 2-PE?
There are essentially four things you should do to prepare: (1) Review the Orientation Guide on the NBOME website https://www.nbome.org/docs/PEOrientationGuide.pdf so you fully understand what this exam is about, (2) Practice your DPR, history-taking, PE, and OMT skills, (3) Get (and use) critical feedback from peers, residents, and preceptors, and (4) Take full advantage of the LAC experience provided by the College.

Throw away your PE board review book!
If you choose to utilize a board review book, then use the book to enhance, but not change, what you normally do. Review books emphasize algorithmic, mnemonic-based approaches, and often
make claims that, “if you complete all the checklist items, you will pass.” However, Dr. R. T. Scott (Osteopathic Physician, MSUCOM Alum, and longtime teacher of clinical skills) offers a cautionary note, "memorizing and demonstrating a straight algorithmic approach to the patient will reinforce the perception of a DOCTOR focused encounter. Clinical encounters (not just for testing) should be PATIENT focused. It's advisable to demonstrate PATIENT focused care at every opportunity during these encounters." By the way, this is the basis for excellence in Osteopathic Care of all patients. As one example of a simple way to be more patient focused, Dr. Scott suggests you literally push your chart aside and look at your patient. If you need to write something down, say, “I think what you just said is important, so I’m going to write it down.” Include the patient in your process, make eye contact, and make sure s/he feels cared for. During the exam, let patients know what you’re going to do and don’t hurt them. These things matter to patients and they matter to SPs. They are important to you because they can make the difference between Pass and Fail and doing them will make you a better clinician.

Get as much feedback as possible
Practice physical exam techniques, OMM, and DPR skills with a skillful peer or resident – someone you trust to give you honest feedback, not just tell you what you want to hear. As your test date approaches, on any rotation, ask a preceptor you trust to evaluate one of your patient interactions; explain that you will soon be travelling to Conshohocken so they understand the importance of providing critical feedback. In addition, MSUCOM provides a simulated Level 2-PE for practice. Sometime between January and April of your 3rd year you will be scheduled for a day in the Learning Assessment Center (East Fee Hall in East Lansing).

What Should You Do if You Fail?
Contact Susan Enright, DO; Director of MSUCOM Preclerkship Curriculum, susan.enright@hc.msu.edu and your Academic and Career Guidance Advisor

Web Resources
National Board of Osteopathic Medical Examiners (NBOME) – COMLEX: https://www.nbome.org/
Information for Osteopathic Medical Students: https://www.nbome.org/osteopathic-medical-students/
COMSAE (Comprehensive Osteopathic Medical Self-Assessment Exam): https://www.nbome.org/exams-assessments/comsae/
United States Medical Licensing Examination (USMLE) http://usmle.org
National Board of Medical Educators (NBME) www.nbme.org
USMLE Bulletin of Information http://www.usmle.org/bulletin/
College Resources

Office of Academic Success and Career Planning

Office of Personal Counseling and Health Promotion
http://www.com.msu.edu/Students/PC_HP_New/Personal_Counseling_Home_Page.htm

Office of the Associate Dean of Student Services
http://www.com.msu.edu/Students/Office%20of%20the%20Associate%20Dean.htm

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Cited Works


