

Pre-Matriculation Guide

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**Michigan State University College of Osteopathic Medicine
Academic and Career Advising**

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Introduction

Welcome to MSUCOM! The [Office of Academic and Career Advising](#) is here to help you as you progress through medical school. Our office primarily focuses on three areas: **academic success**, **board preparation**, and **career planning**. Each of these areas is described in more detail below. We have advisors at all three sites and work closely with course faculty, administration, and student life to create a supportive atmosphere here at MSUCOM.

Academic Success

Whether through 1:1 appointments, small group workshops, or through our online resources you can receive help with *developing effective study strategies*, *test taking skills*, *time management*, and *managing multiple priorities*. We work with course faculty to provide academic workshops that integrate study skills with course content that you will be learning in real time. With a network of peer tutors, we are also able to connect you with current students who have been in your shoes and are able to provide both social and academic support as you progress through each semester during your first year.

At some point during the first two years of medical school you may be invited to see an advisor for an "Academic Success Check Up." This appointment is a chance for you and your advisor to discuss your current performance and develop strategies for improvement. These sessions are not punitive, but they are required to help ensure that you are staying on track with the pace of medical school. You are encouraged to schedule a voluntary appointment at any time with an advisor to discuss how you can study more effectively and improve your understanding of the material. More information on academic success can be found in the [MSUCOM Academic Success Guide](#).

Board Preparation

The biggest predictor that we have seen of success on board exams is preclinical coursework performance in the first two years of medical school. Studying for boards should begin on day one in medical school by doing as best as you can in each of your pre-clerkship courses. Our office will provide workshops and sessions to educate you on how to choose board style resources, creating study schedules, tackling board style questions, and more. The [Board Prep Guide](#) goes into further detail about each exam, resources available, and how to prepare.

Timeline of Board Exams	
Summer after Year 2	As an osteopathic medical student at MSUCOM, you will take your first round of board examinations (COMLEX Level 1) during the summer between second and third year. Some students will also elect to take the USMLE Step 1 in addition to the COMLEX Level 1. This can be a difficult decision and may not be necessary in your situation so we encourage you to speak with an advisor about your individual circumstances before planning to take both exams.
Year 3	Students will then take COMLEX Level 2 Cognitive Evaluation (CE) and COMLEX Level 2 Physical Examination (PE) sometime during third year of medical school depending on their clinical rotation schedule.
Residency Year 1	COMLEX Level 3, your final osteopathic licensure exam, will occur sometime during your first year of residency.

Career Planning

Your advisors have put together a career planning curriculum so that you do not become overwhelmed with the steps and decision-making processes along the way. Throughout all four years of medical school the advising team will facilitate intentional interactions such as 1:1 advising appointments, group presentations, webinars, etc. to keep you on track with your future career goals. In these sessions we will provide you with timely information and next steps so that you can make educated decisions about your

future. Our office relies on national and MSUCOM historical data to help guide you as you select a specialty, understand your competitiveness, and prepare for residency. Additional information and resources related to career planning can be found in the [Career Planning Guide](#).

Staying on Track at MSUCOM

As described above, we have several intentional interactions in place to help you reach your goals and make important decisions along the way. It is helpful to breakdown what to expect each year and focus on timely information so that you do not become overwhelmed.

<p><u>Year 1:</u> Understanding yourself</p> <p>Now is the time to prioritize coursework and focus on performing well academically.</p> <p>Learn who you are as a learner and your learning style preference.</p>	<ul style="list-style-type: none"> • Attend Just in Time semester orientations. • Ask for help when you need it! • Take the Learning Success Type Indicator Assessment • Get involved in MSUCOM specialty interest groups, leadership positions, and your class student government. • Learn about base hospitals at the Base Hospital Expo in late spring. • Shadow to learn more about specialties of interest. • Tour base hospitals. • Begin building your CV
<p><u>Year 2:</u> Explore your options</p> <p>This year should be spent focusing on coursework, thinking about your future career goals, and studying for your first round of board exams.</p>	<ul style="list-style-type: none"> • Complete required Pre-clerkship Career Planning Meeting • Participate in extracurricular activities and research • Select your base hospital. Need more information? Ask your advisor • Attend required meetings about clerkship and base hospital selection. • Take COMLEX Level 1 (required)/USMLE Step 1 (optional)
<p><u>Year 3:</u> Choose a Specialty</p> <p>Now's the time to decide on your specialty or specialties. During clinical rotations, you'll be preparing for your second round of board exams, obtaining letters of recommendation, mapping out your 4th year, and completing your residency application. We will periodically visit your base hospitals to provide timely information, host webinars and send you out short career planning videos to keep you on track during this busy time</p>	<ul style="list-style-type: none"> • Take COMLEX level 2 CE & PE • Be aware of relevant deadlines • Schedule "audition" rotations • Draft Personal Statement
<p><u>Year 4:</u> The Match</p> <p>This year will bring the match process. You will move between audition rotations, elective/selective rotations, interviews, and COMLEX Level 2. Although busy, this year will finally bring you to your end goal: Graduation and Residency!</p>	<ul style="list-style-type: none"> • Register for the Match • Interview with residency programs • Rank programs using the official Rank Order List (ROL)

What to expect as you transition into medical school.

You will most likely hear the phrase “Studying in medical school is like drinking from a fire hose,” many times throughout your medical education. Often students find that conceptually medical school is not more difficult than their upper level undergraduate courses, but the volume and pace is significantly greater (hence the fire hose analogy). It is important to **implement smart study strategies** (See Appendix A) that will allow you to manage the large volume of content successfully.

Over the years, we have consistently seen students struggle with similar issues as they transition into medical school. These issues include having a positive mindset, becoming a self-directed learner, understanding oneself and how one can improve, and learning to manage time effectively. Each of these topics is described below. Additional study tips and recommendations for successfully navigating the transition into medical school can be found in the appendices.

1. Having a Positive Mindset

The transition into medical school is one that you should not take lightly. The MSUCOM faculty and staff all want to see you succeed. Do not underestimate the power of a positive mindset as you embark on this journey. It is important to ask for help, have an open mind, and be willing to change. In order to develop a positive mindset, there are two things you need to consider.

- The first is the difference between Proactive and Reactive Thinking
 - Thinking proactively helps to alleviate panic when things begin to pile up. By taking time to prepare for upcoming events, you can better manage situations that pop up out of your control.
 - When you rely on reactive thinking, you are often caught off guard when situations arise that you may have been able to control by being proactive. People who are constantly reacting to situations versus being proactive find themselves in higher stress situations more frequently causing them to lose control.
- The second is fixed versus growth mindset:
 - A fixed mindset is the belief that there is a capacity for learning and each person’s capacity is different.
 - For example: smart people are just smart, and they don’t have to struggle or work hard to be smart. Things come easy to them; they need to put in less time than I do.
 - A growth mindset is the belief that anyone can learn and improve in any area if they put in the effort.
 - For example: I’ve never been good at chemistry; but if I continue to practice every day, I will get better.

So how can you change your mindset and become a more positive thinker?

- First, take a moment to assess the situation realistically – what is actually happening? This isn’t a time to be in denial or to be catastrophizing things, but you should be realistic.
- Next, accept the situation, focus on what is under your control, recognize you have a choice and can decide how to respond.
- Finally, spend time problem solving
 - Identify the things in and out of your control
 - Seek resources to help
 - See failures and problems as temporary and as learning opportunities

There are some questions you can ask yourself when you are in a situation that would require you to see the bigger picture. Think to yourself...

- What am I trying to achieve here?
- What do I want?
- What resources might I need to get there?
- What specifically do I want from this outcome?
- Is this decision getting me closer to my outcome? Or is it pulling me away?
- What’s a more optimal decision I could make?

- How will I know when I have achieved my desired outcome? What will I see, hear, feel or experience?

Remember, your advisors are here to help you throughout your time at MSUCOM. If you are struggling with the transition to medical school or are displeased with your performance, seek help sooner rather than later.

2. Becoming a Self-Directed Learning

In medical school, it is essential to take responsibility for your learning. This focus on self-directed learning is required by accreditation standards because clinicians must be reflective and self-directed in learning to be effective practitioners. Specifically, self-directed learning includes four sequential steps: self-assessment of learning needs; independent identification, analysis, and synthesis of relevant information; appraisal of the credibility of information sources; and feedback on these skills.¹

You will encounter self-directed learning in many aspects of our curriculum. Specifically, you will participate in course sessions designed to incorporate these steps through guided inquiry, flipped learning, case-based learning, and individualized learning plans. Though you will also participate in lecture sessions, these are designed as interactive lectures to support active engagement and model skills necessary in self-directed learning and study, such as the six strategies for effective learning mentioned later in this resource along with metacognition. In addition, you will have the agency to self-direct learning through co-curricular and extra-curricular opportunities such as: elective courses, service learning, and research.

MSUCOM will provide access to various resources, programs, and assessments to help you reflect on your approach to learning and build capacities for more effective self-directed learning. You are encouraged to meet with an advisor to discuss how you can grow in these areas as you begin medical school.

3. Understanding Yourself and How You Can Improve

Many students are unaware of their strengths and weaknesses when they begin medical school. This is often the first time that students struggle in courses and it can be challenging to know where you need to improve. MSUCOM uses several assessments and other resources described below to help you better understand yourself as a learner and how to come up with an improvement plan tailored to your individual needs.

Learning and Study Strategies Inventory (LASSI)

What is LASSI?

As part of your orientation to MSUCOM you will complete the [Learning and Study Strategies Inventory \(LASSI\)](#), a 10-scale, 80-item assessment developed at the University of Texas at Austin² of student's awareness about and use of learning and study strategies related to **skill**, **will**, and **self-regulation** components of strategic learning.

Explanation of the scales

The focus is on both covert and overt thoughts, behaviors, attitudes, and beliefs that relate to successful learning and that can be altered through educational interventions. Furthermore, these thoughts, behaviors, attitudes, motivations and beliefs can be altered through educational interventions. Research has repeatedly demonstrated that these factors contribute significantly to success in college and that they can be learned or enhanced through educational interventions such as learning strategies and self-regulated study courses and programs.

Skill Component - These scales examine student's learning strategies, skills and thought processes related to identifying, acquiring and constructing meaning for important new information, ideas and procedures, and how they prepare for and demonstrate their new knowledge on tests or other

¹ <https://lcme.org/publications/#Standards>

² The LASSI was developed at the University of Texas at Austin by Claire Ellen Weinstein, Ph.D., David R. Palmer, Ph.D., and Taylor W. Acee, Ph.D

evaluative procedures. Scales included within the skill component: *information processing, selecting main ideas, and test strategies.*

Will Component - These scales measure students' receptivity to learning new information, their attitudes and interest in college, their diligence, self-discipline, and willingness to exert the effort necessary to successfully complete academic requirements, and the degree to which they worry about their academic performance. Scales included within the will component: *anxiety, attitude, and motivation.*

Self-regulation Component - These scales measure how students manage, or self-regulate and control, the whole learning process through using their time effectively, focusing their attention and maintaining their concentration over time, checking to see if they have met the learning demands for a class, an assignment or a test, and using study supports such as review sessions, tutors or special features of a textbook. Scales included within the self-regulation component: *concentration, self-testing, time management, and using academic resources.*

How to interpret and utilize your results.

The LASSI provides standardized scores (percentile score equivalents) and national norms for ten different scales (there is no total score since this is a diagnostic measure). The LASSI is both diagnostic and prescriptive. It provides students with a diagnosis of their strengths and weaknesses, compared to other college students, in the areas covered by the 10 scales and it is prescriptive in that it provides feedback about areas where students may be weak and need to improve their knowledge, attitudes, beliefs and skills.

After taking the LASSI and receiving your results, if you are concerned about how any of these areas might be affecting your performance or would like to learn more about how you can grow in these areas, please set up an appointment with your advisor to discuss your results. This could include a referral to Wellness & Counseling, adjusting your study methods, finding a study group, developing a system for accountability, discussing goal setting and decision making, or connecting with other MSUCOM resources such as SCILS workshops, peer tutors, or the PEAK program. Additional information about these resources can be found at the end of this guide under MSUCOM Resources.³

SuccessTypes in Medical Education

Another resource to help improve your self-directed learning is the SuccessTypes program⁴ developed by John W. Pelley, Ph.D. and Bernell K. Dalley, Ph.D. The SuccessTypes program is used by MSUCOM to help students primarily in the first and second years of medical school. Dr. Pelley developed the SuccessTypes curriculum after working with struggling medical students at the Texas Tech University School of Medicine for over 10 years. The intention of his program is to help students understand how their unique personalities, as identified from the Myers-Briggs Type Indicator (MBTI), influence their approach to learning and the way they *prefer* to process information. Pelley's modified MBTI questionnaire called the [Learning Style Type Indicator](#) consists of 28 forced-choice items that indicate a preference for 1) an active (extroversion, E) or reflective (introversion, I) approach to gathering information; 2) a fact-based (sensing, S) versus potential-focused (intuition, N) orientation to experiences; 3) either a thinking (T) or feeling (F) style, where objective and subjective disposition plays an important role, respectively; and 4) a disposition for order and planning (judging, J) that contrasts with a spontaneous, flexible approach to learning (perceiving, P).⁵ Each student has inherent and potential strengths that when identified can be developed to put them in control of their learning and improve their performance on medical school examinations.

³ https://www.hhpublishing.com/ap/_assessments/LASSI-3rd-Edition.html

⁴ <https://www.ttuhs.edu/medicine/medical-education/success-types/book.aspx>

⁵ <https://www.ttuhs.edu/medicine/medical-education/success-types/documents/LSTIntro.pdf>

As you progress in the MSUCOM curriculum, you will be exposed to the SuccessTypes program in your coursework, during workshops, and with your advisor. If you would like to discuss your psychological type and how it may be impacting your learning, please contact an advisor.

4. Learning to Manage Time Effectively

Time management:

Reflects your values and priorities – what’s important to you and what you want out of life.

Involves setting goals, determining what you need to achieve them, and creating a plan to make them happen.

Requires flexibility, not rigid adherence to a schedule.

Enables you to live a fulfilling and balanced life in a way that won’t compromise your values and sacrifice your important goals.

Fosters self-empowerment through recognition that outcomes, such as getting to class on time or doing well in your courses, are a result of your choices and actions (e.g., having an internal locus of control).

A train or bad traffic may make you tardy, but the real reason you arrived late is because you didn’t leave early enough to allow for a delay. Some people are always early. How do they do it? They plan ahead and anticipate possibilities like traffic delays. Likewise, failing an exam cannot be blamed on bad questions. Failing an exam is about insufficient preparation. Both scenarios, being late and failing an exam result from poor planning.

How you use your time is strongly influenced by a number of different factors, such as:

- Core personality
- Prior experiences
- Current circumstances
- Attitude
- Motivation
- Goals
- Habits

Habits versus Goals

Time management behaviors are largely habitual, and therein is our challenge. We do what we do because we do it. Habits are automatic, triggered by environmental or mental cues – we go on autopilot and stop thinking. We rationalize, after the fact, that what we do is worthwhile simply because it’s what we do, “This must be important otherwise I wouldn’t be doing it.”

There is a fundamental difference between habitual and goal-directed behavior. Habitual behavior is initiated at a subconscious level while goal directed behavior is conscious; different brain regions are involved. A behavior may begin as goal-directed, but through time and repetition becomes habitual. Because habits are subconscious, they are notoriously difficult to break or change.

We need to periodically recalibrate to ensure that what we do really is important and worthwhile and aligned with our goals and values. We need to make sure we’re doing the right things for the right reasons² to get us where we want to go and lead the life we want to lead. We need to be aware of and reflect on the underlying motivations that guide our behavior and potentially cause us to spend valuable mental energy and time on things that aren’t really important and might in fact be self-defeating. Your attitudes, values and goals are the foundation of effective time management and should guide your selection and use of time management tools and tactics. To become good at time management, you may need to break some old habits and start new ones.

Time Management Tools:

- Smart Phone Planning Apps
- Alarm Clocks, Watches, Timers
- Course Schedule
- MSUCOM Calendar
- Personal Calendar
- To-Do Lists

How can time be managed?

Time management tools are often useful, even indispensable:

- If you don't naturally wake up on time, you set an alarm.
- If you don't know what time it is, you look at a clock.
- If you can't remember what you need to do, you make to-do lists.

- But time management is not about tools. Owning a toolbox doesn't make you a carpenter. Deciding what to do, when to do it, and even how to do it, that's time management. Time management isn't even about managing time. How can you manage something you can't control?
- Time management is about managing yourself. It is a life philosophy, which guides your selection and use of tools, tactics, and strategies as a means of organizing your life and using your time both efficiently and effectively.

For better or worse, your use of time says something about you. You may consider yourself organized and efficient, while others see you as rigid and controlling. You may feel carefree and easy-going, but chronic tardiness may send the message, "My time is more important than yours."

I've known academically successful students who made a bad impression and even failed a clerkship rotation for being late to didactics or rounds. It is beneficial to consider other's expectations and perceptions of you (especially those who will evaluate you and have the potential to influence your career).

There's more to becoming a doctor than "wanting to help people" and passing exams. What's more, passing exams often comes down to how you use your time. You can decide whether or not you're going to be caught up in your classes or cram for the exam at the last minute. You will develop a study schedule and determine how much effort to put into preparation for COMLEX. These are decisions you can and must make. Your choices, your priorities, what you deem important and worthy of your time – it's all up to you – and while you cannot always control the consequences of your choices you need to take responsibility for making them.

The M.A.G.I.C. of time management

Motivation drives you. Attitude guides your behavior. Goals provide direction – a target to aim for. Initiative involves planning – without plans, goals are just fantasies. Without commitment, nothing gets accomplished. Each of these elements of time management is discussed below.

M is for Motivation

Remember your excitement when you received that letter, email, or phone call offering admission to medical school? Remember how it made you feel when you accepted that invitation? The wording is a reminder that you're here by your own choice because something drove you to medicine. Now, note your position on the approximate timeline below. You're probably 6 or 7 years or more from being fully licensed to practice medicine.

Between now and then...		
Courses	Base hospital selection	Residency application deadlines
Studying	BLS, ACLS certification	Writing your CV
Exams	Level 1 Board exam	Asking for letters of recommendation
More exams	Rotations in specialties you don't like or care about	Level 2 Board exam
OSCEs	Even more exams	Interviews
Assignments	Evaluations	Residency match
Immunizations	Dealing with mean people	Level 3 Board exam
BBP & HIPAA compliance training	Long hours	Subspecialty exam
Fingerprinting, background checks, and drug screening	Not having control over schedule	

Motivation is an essential element of achievement. You really have to want it, whatever “it” is. The more challenging the goal, the more motivation you need to be successful. In medical school, motivation to maintain a high level of commitment often wanes as the day-to-day reality sets in (see above).

“I don’t know what’s wrong with me. I feel motivated. I really want to be a doctor, but I can’t get myself to study.”

Now that you’re here, you may find that you’re not always interested in what you’re learning, or that the idealized notion of “being a doctor” doesn’t quite match the reality of the process of becoming a doctor. The fact is that medical school requires sacrifice and hard work and doing things you don’t want to do and yet doing them anyway because you know they’re a necessary means to a desired end. Hopefully, some of it will be interesting and fun, but not all of it will be or should be.

Are your reasons for becoming a doctor sufficiently motivating to sustain you through tough times?
Are you willing to delay gratification and do what needs to be done?

A is for Attitude

Attitude is an amalgam of your beliefs, values, emotions, and disposition that guides your behavior. The following attitudinal characteristics demonstrate a positive correlation with academic success.

Personal Responsibility:

- Individuals with a strong Internal Locus of Control believe their successes and failures result from variables under their own control, and are not the result of external forces or circumstances
- Self-regulated learning behaviors
- Metacognition – thinking about thinking
- Strategic action – goal-setting, planning, self-monitoring, and self-assessment
- Motivation to learn – the driving force behind academic achievement
- Self-efficacy – belief in one’s ability to achieve a goal or complete a task
- Conscientiousness is a personality trait strongly correlated with academic and career success
- Conscientious people are typically meticulous, reliable, thorough, and hardworking; they pay attention to detail, seek out important information, and follow through with commitments; hence they tend to achieve their goals
- Positive emotions
- Enjoyment, hope, and pride

G is for Goals

Goals determine our priorities. Though demonstrated to be beneficial, setting achievable goals is a learned skill that must be practiced.

Academic Achievement Goals

Your academic achievement goals determine how you approach learning, including how much time you allocate for studying.^{3,4} Research has demonstrated a relationship between achievement goals, learning, and performance. Some findings are presented below.

Goal Level	Learning / Achievement Goal	Outcome	Correlations / Associations
Mastery	Goal: Learn as much as possible (Internal standard of competency)	Positive	High effort and task focused approach Intrinsic interest and enjoyment of learning Deep learning (retention)
Performance approach	Goal: Do better than others (External normative standard)	Positive (mixed)	Competitiveness and test anxiety Increased exam scores, but low retention Low persistence after failure
Performance avoidance	Goal: Not do worse than others (External normative standard)	Negative	Low performance, low interest, and low effort Test anxiety, anger, hopelessness Self-handicapping behaviors
Work avoidance	Goal: Exert minimal effort (No standard of competence)	Negative	Similar to above

Goal-Setting

Do you have specific, well-articulated goals?

Have you written them down?

Have you told someone about your goals?

To take your goals from an abstract idea to a concrete reality, write them down and analyze them. Are they the right goals for the right reasons? Are they SMART?

Set S.M.A.R.T. goals:

- ✓ S = Specific as opposed to vague
- ✓ M = Measurable as opposed to nebulous
- ✓ A = Achievable as opposed to unrealistic
- ✓ R = Relevant as opposed to trivial
- ✓ T = Time-bound as opposed to open-ended

What are your long-range, “big picture” life goals? These guide sub-goals, decision-making, and priority setting. Where do you want to be in 5 years? In 10 years? What specialty interests you? Do you want to have your own practice? Do you want a family?

What are your short-range goals? Short-range goals are important because they keep you focused and can make your plan feel more manageable. Short-range goals help with planning and time utilization. Are your short-range goals consistent with your long-range goals? They shouldn’t steer you “off course.”

What are your career goals? Your academic goals? Your personal goals? Are they compatible?

Goal: Obtain Dermatology residency in California.

This career goal leads to a number of short-range goals.

Short-range Goal #1: Score high (~700) on COMLEX exam.

Short-range Goal #2: Learn as much as possible (Mastery goal).

Short-range Goal #3: Focus on academics and maintain high level of performance in courses.

Short-range Goal #4: Improve self-regulatory behaviors (e.g., Metacognitive skills, Time management, Self-assessment).

Certain things follow from the goals we set for ourselves, right and wrong ways to approach them, effective versus ineffective ways to attain them. Don’t leave the achievement of your goals to chance.

Share your goals with another person. Discussing your goals accomplishes three important things:

It makes them feel more real

It makes you more accountable – it’s harder to back out of a goal if you’ve told someone about it

It provides an opportunity for others to support and motivate you to succeed.

I is for Initiative

Initiative is about strategic planning. In order to plan effectively, we need information; we need self-awareness, but all too often we are completely unaware of how we spend our time. To get a handle on your time utilization, complete the exercise located in the appendix.

Be Proactive

What is under your control?

As your life unfolds, you can choose to be reactive or proactive. Being proactive means looking ahead to see what’s coming and doing what you can to be prepared; it’s about anticipation and planning.

True story: A distraught second year medical student came to me in a panic because her June wedding and COMLEX test date were only days apart. She asked, “How can I plan a wedding and study for COMLEX at the same time?” I told her, “I don’t know.” I only know what I can and cannot do.

Absolute control is a fantasy. You cannot control other people. You cannot control consequences. But there are things you can control, and one of them is you! There are lots of things you can choose to do or not do. For example, you can choose to not get married during May or June of your 2nd year.

The point is you are not a hapless victim of circumstances. Be proactive not reactive. Between a stimulus and your response there is the opportunity for choice. How you react is up to you.

Urgent versus Important

Every activity can be defined by two factors: urgency and importance. Urgency refers to time frame; urgent things need to be done now. Importance refers to results and benefits; important things enhance your life and further your goals. Although this distinction seems to imply a dichotomy: urgent or not urgent, important or not important, it is more realistic to think of urgency and importance as lying along a continuum from low to high.

It is argued that truly successful and effective people spend more time pursuing activities that are important but not particularly urgent², in contrast to the more common assumption that high achievers are always dealing with matters of extreme urgency. Success does not require only doing important things – that’s highly impractical, if not impossible – but by being proactive through anticipation and planning you can prevent many things from becoming urgent. As with a health problem that, if ignored, can become an emergency, so can other things in your life, such as paying bills, car maintenance, and studying for an exam.

Efficient versus Effective

You may be “busy” but are you really getting the job done or just wasting time?

Many students choose to not attend lecture. In justifying this choice, they often refer to the concept of “triage,” a medical decision-making process by which priorities are determined. Triage, however, is not about deciding what doesn’t need to be done; it’s about determining the order in which to do the things that must be done. One cannot choose when to attend a live lecture – it is when it is. Choosing to view a lecture recording or watch the streamed lecture from home is not applying the concept of triage.

Question: Isn’t prioritization an important part of good time management?

Answer: Yes, but the more important question is, “How do you make these decisions?” What are your criteria for distinguishing between what’s important and what’s “got to go”? Is it based on what’s most needed, effective, and important, or on what is most desired, efficient, and convenient?

Out of necessity, medical students become obsessed with efficiency, often to their detriment. With reference to class attendance, the notion is that you can’t do it all, and going to class is believed by many to be a waste of time, unless there are points to be earned. Decisions like these are not about learning. Someone who is intrinsically motivated to learn does not need to be motivated by points. Though a lecture or lab may be skipped for the sake of “efficiency,” at the same time, medical students often overlook the many things they do that really are inefficient.

When you set out to study, how much time does it take to get all your stuff out of your backpack? Do you spend time searching for your highlighters or getting your computer ready? How often have you sat down to study and within a couple minutes jumped up to grab a beverage? Or maybe, just as you were settling in, your phone rang, or you realized the place was too noisy, or too quiet, or you weren’t comfortable? How many times have you set out to study only to have a million little things keep you from getting much done, yet at the end of the night, you look at the clock and think, “Wow, I just spent 4 hours studying”?

Complete the statement: “I waste my time by _____.”

- 1.
- 2.
- 3.
- 4.
- 5.

What can you do to streamline some of your processes?

To become more efficient, we often choose short cuts, but are they worth it? Maybe. Perhaps. Sometimes. The problem is that while short cuts take less time, there's good reason to believe they are not effective.

Many common study methods might be efficient (take less time) but are not likely to be effective for learning and retention.

- Cramming (a.k.a. massed effort; as opposed to studying/reviewing material in several sessions spread out over a longer time interval, i.e., distributed effort).
- Trying to guess what will be on the exam in order to reduce how much you need to remember.
- Using other people's study aids instead of creating your own.
- Skipping lecture because it's "not a good use of your time."
- Listening to lectures at double-speed.
- Doing multiple things all at once (multitasking).

On the flip side there are also learning techniques that can be effective but are very inefficient, e.g., recopying your notes or reading your notes over and over again.

The Myth of Multitasking

- What is multi-tasking?
- How does it affect learning?
- Do you think you're good at multitasking?

While reading this, have you checked your email, read or sent a text message, snapped a selfie, checked Facebook, Tweeted, or Googled something? Do you do these sorts of things while sitting in lecture or studying? This is multitasking.

Have you ever been so distracted while you were talking that you said the wrong thing, "T-cells mature in the pizza"? If you were counting, and someone began saying random numbers out loud, would you lose focus?

Distractions divide or divert your attention. They provide a novel stimulus that makes your brain sit-up and take notice. When your conscious attention is drawn to something it enters your working memory. Once there, it can be used immediately (e.g., to make a decision) or potentially stored in long-term memory. When a memory is stored it is linked to existing memories. Distractions while studying can produce wrong or irrelevant connections. Because they're irrelevant and incidental they don't function as effective retrieval cues; there's nothing to associate them with the "right" memory. You might remember that the person sitting next to you during lecture fell asleep and drooled, but that probably won't help you answer a test question. This is similar to being able to recall the color you used to highlight something, but not the information itself. The brain is a peculiar organ.

Multitasking is the (mythical) ability of humans to do more than one thing at a time. We can't do it; we switch-task. Every time we switch task, time is wasted. People think they're good multitaskers. They're not. They might do many things at once, but they don't do them well. Is it effective? In a word, "no." Is it efficient? Also, "no." Research suggests that although we think we're getting more done, productivity actually declines when we try to do several things simultaneously.⁵ In addition, multitasking compromises your ability to acquire transferrable knowledge.⁶ Knowledge transfer is when stuff you learn in one context can be applied in another (novel) context. This is the type of knowledge you need in order to apply what you learn through studying to answer a test question or make a medical diagnosis.

Bottom line: Multitasking while studying actually wastes time and prevents you from being fully mentally engaged in the important task, learning your course material.

Effective study strategies:

- Focus on one task at a time

- Monitor actual time-on-task
- Control your environment and avoid distractions
- Know which activities can be combined (e.g., socializing and exercise)
- Know which activities require single-minded focus (e.g., studying complex material)

Planning and Scheduling

Planning is an important activity, not an urgent one. Goals without plans are just fantasies. If all you do is plug events into your iPhone, Outlook calendar or planner, then wait for an alarm to go off reminding you where to be, you're not planning, you're reacting.

If all you do is day-to-day scheduling, you lose sight of the big picture of your life, your goals and values. You tend to ignore importance, focus on the urgent, and function in continual crisis mode.

However, strategic planning can be challenging. It does take some up-front time and requires knowing what you need to do, breaking larger tasks into smaller pieces, prioritizing to make sure you actually accomplish what you need to accomplish without wasting time, and being flexible so you can adapt to changing circumstances. Here are some steps in that process as described in an excellent short [article](#) by Dr. Susan Johnson.

1. Priorities: How to Decide What to Do and When
2. What to do: Create a written list of all your projects no matter how big or small.
3. Begin by listing everything
4. Then, remove unnecessary items
 - First, sort projects into categories:
 - Required
 - Promised to someone
 - Important
 - Just interested (distinguish needs from wants)
 - Second, remove:
 - Things not promised
 - Things you merely hope to do or wish to do
 - Third, if the final list is still unmanageable, re-think your workload

When to do it: Develop a Weekly Schedule and a Daily Priority To-do List

- Create a weekly schedule with time blocked out for lectures, labs, sleeping, and eating.
- Fill in with other scheduled (important, required) commitments (e.g., appointments, meetings, etc.).
- Set aside blocks of time for family and friends, exercise, and thoughtful reflection.
- Set specific time limits for email and other mundane activities.
- Each day identify a short list (<5) of must-do tasks (alternate between high-priority projects and other categories, such as laundry and mundane chores).
- Use your time strategically.
- When you're most alert, study your most difficult material.
- When you are brain-fried, perform less cognitive tasks (email, chores, exercise)
- Review your schedule on a weekly basis to connect your goals with your day-to-day life.
- Identify potential new projects, upcoming deadlines, and areas of focus.
- Revise schedule as necessary.

C is for Commitment

Commitment is about getting things done, which requires making and keeping promises to yourself and others.

How do you feel when you decide to study but you don't do it? Or you resolve to attend lecture, but when the alarm goes off in the morning, you hit snooze, roll over, and go back to sleep?

We all have an inner guide that tells us what we should do – our conscience – but sometimes we don't listen, and ultimately, this can erode our feelings of self worth. If you frequently break promises, pledges and resolutions, it's time to make some changes! There are numerous potential barriers to action, such

as: procrastination, perfectionism, indecision, lack of information, lack of tools and “not enough time.” To overcome barriers and get things done that you need to/should be doing, try the following steps taken from another excellent short [article](#) by Dr. Susan Johnson.

Execution: Getting Your Work Done

1. Use next action thinking
2. Just as goals need to be specific and achievable, projects need to be broken down into actionable pieces. Dr. Johnson recommends using action verbs when itemizing steps.
3. To determine whether something is really a “next” action, ask yourself, “Could I do this right now if I had the time?” If “no,” why not? Is it because you don’t have what you need to do it? If so, then completing the missing step (e.g., obtaining a piece of information) should be your next action.
4. Use, don’t lose, short unscheduled bits of time
5. Small time increments, when added up, can amount to hours of lost time every day – 5 minutes here, 10 minutes there.
6. Use these “bits” of time to accomplish a small “next action” task.
7. Begin before you’re ready
8. If you wait to start a project until everything is “just right” – the stars are aligned and you feel “ready” – you might delay starting indefinitely.
9. Tricks to get you moving when you’re really stuck.
10. Set a timer for 5 minutes and promise yourself you’ll work until it goes off.
11. Choose a task at random and complete it. Successfully completing even a small task is rewarding and might provide the momentum you need to keep going.
12. Keep a “reverse” to-do list and write things down as you complete them.
13. Put the materials for your task right in front of you.
14. Take a break for 10 minutes then try again.

Do you procrastinate?

- Medical students cannot afford to procrastinate. If procrastination is a problem that impacts many aspects of your life, seek counseling. If you are putting off a particular task, ask yourself 3 questions:
- Is this task really the next action?
- Does this task or project really need to be done at all?
- Am I experiencing an emotional block?

Summary

- There’s no “right or wrong” way to spend your time, it’s all about doing the right thing at the right time, and this is a very personal, subjective thing. Being efficient and effective is about making the best use of the time you have, and this requires strategic planning. Take a moment for a reality check – a calibration moment, an opportunity for reflection – to ensure you’re doing what you need to do to achieve your goals.
- Self-awareness is the first step in making positive changes.
- How you manage your time sends a message to others about you; send the message you want to send.
- Breaking old habits and establishing new ones is hard work that takes intentional effort and deliberate practice. It doesn’t just happen by chance or good fortune; you have to make it happen.
- Be proactive and exercise choice in the space between stimulus and response.
- Schedule but don’t over-schedule.
- Prioritize. Plan. Execute.

You have an inner guide (your conscience) that tells you what you should do – listen.

Where does your time go?

[Determine how many hours a day you spend completing your tasks.](#)

Create a Strong Schedule Each Week

Try looking at your days by the hour and mapping out what you need to be doing. Here is a blank schedule for you to use to plan out your week:

Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
5-6 am							
6-7 am							
7-8 am							
8-9am							
9-10am							
10-11am							
11am-12pm							
12-1pm							
1-2pm							
2-3pm							
3-4pm							
4-5pm							
5-6pm							
6-7pm							
7-8pm							
8-9pm							
9-10pm							
10-11pm							
11pm-12am							
12-1am							
1-2am							
2-3am							
3-4am							
4-5am							

Resources to Aid in Transitioning to Medical School

Appendix A: Tips for Studying Smart

Not all study methods are created equal and some are more effective than others. The following resources are evidence-based study strategies to consider utilizing when you enter medical school. These methods will not only help you manage the volume of content but also will encourage you to move beyond memorization to understanding.

How to study efficiently and effectively

The University of California San Diego Medical School has provided a helpful guide with tips on [how to study efficiently and effectively](#), enabling you to handle the volume and pace of your coursework.

6 Strategies for Effective Learning

The Learning Scientists is a group of cognitive psychologists whose research is centered on [effective learning strategies](#). They have collected their findings and produced instructional guides on how to study utilizing these strategies which ultimately lead to long term retention. Your advisors will encourage you to incorporate these methods into your study plan throughout your time at MSUCOM. Some of these strategies may come more naturally than others, but you are encouraged to try incorporating active study methods such as these into your day to day routine.

Learning Strategy	What does it mean?	Where can I learn more?
Spaced Practice	Space out your studying over time	Blog post: Spaced Practice
Retrieval Practice	Practice bringing information to mind	Blog post: Retrieval Practice
Elaboration	Explain and describe ideas with many details	Blog post: Elaboration
Interleaving	Switch between ideas while you study	Blog post: Interleaving
Concrete Examples	Use specific examples to understand abstract ideas	Blog post: Concrete Examples
Dual Coding	Combine words and visuals	Blog post: Dual Coding

How to get the most out of studying

This excellent five-part series (the longest is 9 minutes) is packed with solid information and practical advice on [how to get the most out of studying](#). Dr. Stephen Chew discusses the following topics:

- Developing a Mindset for Successful Learning
 - Overview of the information presented in the video series. The information is organized into 10 Principles of Effective Studying that students should understand if they wish to maximize learning from their study time.
- Beliefs That Make You Fail...Or Succeed
 - Examines common mistaken beliefs students often possess that undermine their learning. The video tries to correct those misconceptions with accurate beliefs about learning.
- What Students Should Understand About How People Learn
 - Introduces a simple but powerful theory of memory, Levels of Processing, that can help students improve their study.
- Cognitive Principles for Optimizing Learning
 - Operationalizes the concept of level of processing into four principles that students can use to develop effective study strategies.
- Putting the Principles for Optimizing Learning into Practice
 - Applies the principles of deep processing to common study situations, including note taking and highlighting while reading.
- "I Blew the Exam, Now What?"
 - Addresses what students should and should not do when they earn a bad grade on an exam.

UNC Learning Center

The University of North Carolina Learning Center provides [helpful tips and tools](#) on studying smarter, being more productive, improving reading comprehension, and acing exams.

Appendix B: Study Materials & Resources

Using Your MSUCOM Course Pack

At the start of each semester you will receive a “course pack” for each of your classes that semester. Think of this pack as your primary textbook for each course. We encourage students to be intentional about how they prepare [before](#), [during](#), and [after](#) lecture.

What are learning objectives and how to use them?

Each lecture (and lab) will contain learning objectives that you can use to guide your studying. There will be a mix of lower order and higher order objectives, so you must decide how you are going to approach the material based on the level of mastery determined by the learning objectives. Simply answering the learning objectives is not enough. Use your learning objectives to get a big picture view of the content you will be studying. It is often helpful to look at the learning objectives at the start of a study session, and then again at the end to determine if you are able to answer the learning objective without referring to your notes. If you are not able to clearly answer the learning objective, perhaps you need to alter your study methods using some of the effective and efficient study methods described above.

Cautionary Notes about Anki, Quizlet, Videos, First Aid

Anki, Quizlet, First Aid, and supplemental videos are very popular in medical school, however please do not discount the importance of going to lecture and focusing on the material presented in your course pack.

- **Anki & Quizlet** – Study aids such as Anki and Quizlet promote rote memorization. While these can be helpful for some students, many have found that they are not as useful as many students claim. We encourage you to incorporate active learning methods into your study plan for a deep understanding of the material and utilize Anki and Quizlet as supplemental aids. For more information about active learning methods refer to the MSUCOM Academic Success Guide.
- **Videos** – Many students find videos through YouTube, Boards and Beyond, or other sites that align with the lecture material. These can be helpful but make sure you are prioritizing your lecture material first and using these as supplemental aids as well.
- **First Aid** – First Aid is a high yield review book that can be helpful for finding the “big picture” but is not sufficient for learning the detailed information. This resource is especially beneficial when studying for board examinations but proceed with caution when using First Aid in your pre-clerkship courses. Many students have found annotating in first aid to be a helpful practice throughout the first two years of medical school. You are encouraged to write examples, clarifying details, or other notes in the margins and blank spaces that you can refer to when studying for board exams. Some students choose to unbind the book and place the loose pages in a 3-ring binder or separate folders for each subject. You are encouraged to take an active approach and modify it to whatever works best for you. Avoid passively reading and instead utilize the study methods described in previous sections above. For more information on how to use this resource effectively, contact your academic advisor.

Appendix C: MSUCOM Resources

1. [Academic and Career Advising](#)
 - a. Advisors are available at all 3 sites. Contact com.acguidance@msu.edu
 - b. SCILS: Supporting Competency in Integrative Learning Skills
 - i. SCILS workshops are periodically held in Semesters 1 -6. They are designed to coordinate active study techniques with what the students are currently studying. The sequence of content in the seminars is progressive over the course of Years 1 and 2 and is designed to Support Competency in Integrated Learning Skills (SCILS) over time.
 - ii. The workshops are taught by Dr. Jane Gudakunst and focus on specific strategies that assist students in practicing the following
 - Organization and recall of large volumes of material
 - Basic science and clinical pattern recognition
 - How to reach the clinical stem of board style questions
 - Clinical correlations and application of knowledge
 - Critical thinking skills in the real world
 - Integration of information across courses to increase efficiency in learning
 - c. Peer Tutoring - During semesters 1-3 the Office of Academic and Career Advising facilitates the establishment of peer tutors for first year students. Tutoring is voluntary and free based on the availability of peers. If you are interested in being connected with a tutor for any of your courses please inform your advisor who can provide a list of names, subject areas, and strengths that may align with your needs.
2. PEAK Program – The PEAK program was created and is facilitated by Mangala Sadasivan, PhD. This program promotes cognitive health by emphasizing principles of learning and the use of internal controls to help balance emotional and cognitive demands, resulting in efficiency and maximization of learning potential. For more information, please contact your advisor.
3. [Wellness and Counseling](#) – The Wellness and Counseling team is devoted to addressing the personal and professional issues of MSUCOM medical students. There are counselors at all three sites available to assist you. The premise upon which their office is built:
 - a. Confidentiality is paramount.
 - b. Each individual will be treated with dignity.
 - c. Everyone needs and deserves to be heard; no issue is too small or too large.
4. [Student Engagement and Leadership](#) – The Student Engagement and Leadership team facilitates MSUCOM student events and student organizations. Their services include Orientation, Convocation Ceremony (White Coat), Hooding and Commencement Ceremony (Graduation), Graduation Dinner and Awards Ceremony, Yearbook, Class Composite, Scholarship Committee, and the MSUCOM Merchandise Store.

Appendix D: Academic and Career Advising Video Series

The online [Academic Video Series](#) consists of several short video clips that will walk you step-by-step through topics that are vital to academic success. Topics include test taking tips, time management, managing multiple priorities, active study methods, positive mindset, and managing test anxiety. Please take a look at these short videos and reach out to an advisor if you feel that you are struggling in any of these areas. More information can be found in our Academic Success Guide.

The online [Board Prep Video Series](#) consists of several short video clips that will walk you through an introduction to board exams, why board scores and course grades are important, the importance of question banks in board preparation, preparing for board exams, phases of board prep, scheduling your exams, and more. Please take a look at this short video series and follow up with an advisor if you have any questions.

The [Career Video Series](#) consists of several short video clips that will walk you through selecting a specialty, parallel plans, creating a competitive application, addressing red flags on your application, researching residency programs, understanding audition rotations, and more. Take a look at these resources and follow up with an advisor if you have questions.

Citations and Resources:

1. <https://medschool.ucsd.edu/education/oess/Documents/16-Study%20skills-revised.pdf>
2. <https://lcme.org/publications/#Standards>
3. <https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/tips-students/self-directed-learning/self-directed-learning-four-step-process>
4. https://www.hhpublishing.com/ap/_assessments/LASSI-3rd-Edition.html
5. <https://www.hhpublishing.com/LASSImanual.pdf>
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9. <https://files.eric.ed.gov/fulltext/EJ1136574.pdf>
10. <https://www.learningscientists.org/downloadable-materials/>
11. <https://www.samford.edu/departments/academic-success-center/how-to-study>
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13. Johnson (May 2007). Priorities: How to Decide What to Do and When. *Academic Physician and Scientist*, p.4-5.
14. Johnson (October 2007). Execution: Getting Your Work Done. *Academic Physician and Scientist*, p.4-5.