Your Bruin Guide To All Pre-Med

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If you are reading this you have made the decision or are considering treading the road of becoming a physician. I am going to be 100% honest throughout this manual and here’s the first we all need some golden nugget. It’s no joke that this road is not easy; it’s one that comes with a lot of sacrifice but in those sacrifices, you’ll reap a wide range of rewarding benefits. More so, the journey is far from impossible, but please always remember that it requires a lot of hard work both with academics and extracurriculars. This packet is meant to introduce you to the general requirements needed to enter medical school and includes resources, information on applying to medical school, completing pre-med requirements, sample degree plans, timelines and other information meant to help you on your path. Please note, this is our introductory flagship manual and it will be iterated upon in the coming years. As such, we need your contributions; please shoot your questions via email and make your questions/concerns heard through our in-person workshops. It is our overarching goal to create a community and a longstanding body of information that can facilitate the development of physicians in coming years.

The information inside is based on traditional coursework required, and accepted by most professional programs in the past, however, I encourage you to do your own research for the specific schools and programs to make sure that you complete all coursework required for admission to their program. This packet is culminated from personal experience of physicians, current medical students and a recent UCLA graduate applying to medical school this cycle.
Hi friend! I just want to provide a little bit of context about myself before I begin. I am a recent graduate from the class of 2019 at UCLA. I graduated as a Human Biology and Society B.S. major with a minor in Global Health. I want to disclaim that I am not a self-proclaimed genius and I am far from perfect. I come from Chula Vista, California, a town located 5 miles from the Southern border. I did not have an easy transition to UCLA, I was plagued with imposter syndrome (which I will go into in a later section) that caused me to have a subpar performance in my academics. However, with great mentorship, change in mindset and work ethic, I was able to improve my academic performance and graduated summa cum laude with honors!

To provide further context into my story, I have been a Peer Learning Facilitator, teaching Chemistry 14A/B/CL/153A and Stats 10 for almost 3 years. I have loved this position and have been providing mentorship for my students ever since I started. I am writing this manual because I want to share my story and provide tips and advice on what worked for me during my time at UCLA which I believe will work for you! In addition, I want to provide advice on what I wish I did differently. I also want to share my experience of being a student of color on campus. Whether you are first-generation, low-income, underrepresented, etc. it is easy to feel isolated on UCLA’s campus. I want to let you know that you’re not alone in this journey and there are many of your peers that overcome this challenge day-in and day-out. I hope to provide some useful tips/resources you can turn to help manage mental health while on your path to success at UCLA.

To distinguish between Michael’s and I’s sections, I used a Q&A style and also incorporated many footnotes into my writing (look out for those protips, those are the things you can’t find on the internet).

Please use/not use this manual as you see fit, there are many different views/roads to being pre-med, however, this is what worked for me and many of my peers. Please feel free to reach out to either me or Michael if you have any advice, we are always here to help.
Hello there! I’m glad you’re reading this and as with anything you read nowadays, you should become well-acquainted with who is behind the text you see. Like Nicolas, I graduated from UCLA in 2019. Unlike him, I graduated with degree majoring in Neuroscience and a minor in Biomedical Research (trust me, it sounds MUCH more complex than it really is). I grew up in Chinatown, Los Angeles and attended LAUSD, the second-worst funded school district in the United States, for my elementary years. I then moved to the opposite side of the pond to Temple City (it’s by Arcadia/Pasadena), where after school piano lessons and SAT/ACT tutoring were norms. It is by seeing both sides of the pond that I stand with a unique vantage point, one where I am able to empathize with those from underserved backgrounds and apply educational/didactic properties from more affluent areas to help in any way I can.

For those less interested in the story and are more objective thinkers, I have been a Peer Learning Facilitator for Molecular Biology (LS3/LS7A) for the better part of 2 years and the PLF Supervisor for the Life Sciences for 1 year. I’ve served as the mentorship director for upwards of 30 students and I continue to mentor countless students to pass forward the gift of experience that my mentors passed unto me. I’m also proud to have graduated summa cum laude and with honors!

Nicolas and I are cut from the same cloth; we know how much we owe to our personal mentors and so, we want to help level the playing field by providing resources that can serve a wide range of people. We’ll share what has worked for us, the logistics behind being a premedical student, and perhaps most importantly, our mindsets that have led to our personal success. Please know that wherever you’re from and whatever your experience, I want to echo Nicolas’ sentiment: you are here for a very clear reason. Two completely different reviewers read through your application to UCLA and through a series of tight guidelines that allow only those who deserve it in, you were deemed worthy! Stick to your guns; be true to yourself; we’ll make it out the other side alright.

As aforementioned, this manual is a general guideline that aims to serve a wide range of people. Of course, there are infinite permutations as to roads that will get you into medical school. We’d be foolish to ignore that fact. As such, you can always reach out to Nicolas and I should you have any specific questions. I’ve left my personal e-mail and I encourage you to send your thoughts at any time.
Your 4 years throughout college will be paradoxically both long and short. Although you have your eyes set on medicine, it’s important to have the right mindset to ensure that:

- you complete everything that you need to on time but
- you don’t go too hard to the point that you’ve burned yourself out and left a lot on the table when it comes to experiencing the “golden years of college.” If I could sum it up in one simple sentence, it would be this:

**MEDICINE IS NOT A RACE.**

Please take that seriously! Medicine is a profession that rewards delayed gratification, but also one that punishes those who ignore gratification. In other words, know that you won’t be able to party every week and that you won’t be able to get by without studying intently, but also know that those who don’t develop their social lives and physical/mental habits will also suffer. Like with everything, you will have to find your balance. What follows now is a general timeline for what you should be doing/thinking about throughout your 4 years. This assumes you will be taking no gap year, so adjust it accordingly. Feel free to also ask questions specific to your situation via e-mail to either Nicolas and I or in our Facebook Group, so everyone can learn together! If you’re more of a visual learner, you can find this summarized graphically [here](https://forms.omnisrc.com/signup/v/5cc242068653ed5a50b11735_5ccf62a78653ed76f6e7143b.html)

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1 https://forms.omnisrc.com/signup/v/5cc242068653ed5a50b11735_5ccf62a78653ed76f6e7143b.html
Year 01 Theme:

Healthy Foundations & Academics

Pain Is Temporary, GPA Is Forever; Be On The Right Side Of The Numbers

1. Your GPA is simply a numbers game. It’s the average of the grade points you accumulate over the years, which means that it’s highly important that you start off with a strong foundation.

2. Go into your first year with the intention of figuring out how you learn best and make sure to iteratively change your study habits to get the results you need.

3. This may be a rather unpopular opinion, but I personally felt like WHAT I learned throughout my undergraduate years didn’t matter. It was important that I relatively enjoyed what I studied (Neuroscience), but the fact of the matter is that there is simply no way you’ll remember most, if not any, of what you study throughout those 4 years. Therefore, it is more important to learn how you best learn and how to excel in exams. Once that system is locked down, you’ll just have to rinse and repeat and sprinkle in a pinch of effort to get the grades that you need.

Build Healthy Habits.

1. Your body is a machine. Your brain needs fuel. Oftentimes, I see students blame themselves or even
worse, target their intellectual capacity as the reason why they can’t get the grades they want. Sometimes, it’s not a question of effort or intellect (I’m confident that everyone can get a 4.0 at UCLA with the right systems), but rather it’s an issue of health habits. You need to exercise (get your steps in!), sleep and fuel yourself properly. If you didn’t charge your laptop, you wouldn’t be upset that it wouldn’t turn on. If you don’t feed yourself with healthy food, train your body through exercise or sleep enough, why are you getting upset that you won’t turn on?

Struggle First, Seek Help Later.

1. You will need to learn to be self-sufficient. This is part of the explorative part of optimizing how you personally study/learn. Struggle with the material; get advice from those who have taken the course before you & look through resources on the internet to actively spur your learning process. Oftentimes, I see students jump straight into office hours with the TA/Professor when they can’t explicitly say what it is they’re struggling with. If I can’t ask a directed question exactly what portion of a problem/concept I’m struggling with, I won’t go to Office Hours until I have that question on me. Learn to rely on yourself and once that’s been exhausted (as it often will because you won’t know everything), then leverage the expertise of others.

Optimize Your Studying Environment.

1. The brain is the strongest pattern recognition machine in the known universe. If I flash a picture of a stranger to you on the time scale of microseconds, your brain will already pull a series of associations unconsciously for you to work with. You’ll classify the stranger as male/female, short/tall and probably other things including your assumptions of their race/ethnicity and whatever else that entails. The same is with environments. Recovering alcoholics are asked not to return to places that they binge drink and that’s because the brain recognizes that space as “the place” to binge drink. These concepts are also intimately important for your studying.

2. If you study in your bedroom, you will undoubtedly confuse your brain. Is this a space to relax and watch Netflix or is this a space to put laser focus and tune out distractions? Do I get distracted by lyrics while I study? Do I get disturbed by the conversations my roommate so desperately wants to have with me? Do I study better at cold/hot temperatures? Should I have my Facebook or Instagram open? How many times do I check my phone
while I study? Continue to ask these questions and iteratively improve your studying environment; you want to get to a place where you can put in 2 hours of focused, uninterrupted deep work. Once you’ve found that space, protect it and don’t let anything take that away! That space will save you so much time in the long run, opening up your schedule for other things you truly love to do.

Have A Taste Of Extracurricular Experiences.

1. You have to taste everything before you know what’s right for you. It’s not the most important to join/commit to anything right now, but if you have your academics down, go for an overall breadth of extracurricular experiences. Try a fair amount of things to get a sense of what the club’s mission is, what your possible roles would be going forward and whether you’d be able to balance it with your schedule. Again, we heavily recommend to not bite off more than you can chew. The foundation of your academics is the most important concept to grasp in your first year; without it, you shouldn’t even look in the direction of committing to extracurriculars. Feel free to indulge in their informational sessions and learn about what they do, but diving headfirst into them should be reserved for when you’ve got a handle on your schooling.

Build A 4-Year Plan, Including Summers

1. Envision your time throughout college. You should have a general sense of what you will take when. This ensures that you’re not the student who is scrambling for a couple of hours before their class enrollment time opens or the student who has gone through 3 years without recognizing they’ve missed one key course to enter their upper-division coursework.

2. Build this out; make sure it’s well-vetted by those older than you and your department/major/career counselors. We can always take a look if you have specific questions!

3. If you’d like a video representation of a general timeline, please see this video.

[1] https://www.youtube.com/watch?v=mQAH4ofkXk&
**Year 02 Theme:**

**Exploration & Refined Academics**

1. **Academic refinement; execute on your 4-year plan.** It should just be clockwork now. You go to class, you study the way you do best, you make the grades you need. If you’re struggling at this point, DON’T add more to your plate. Revisit the principles above constantly, push yourself to optimize your learning and make it a focus for you because these numbers matter.

2. **Ensure you’re ready for the MCAT course wise.** You want to at least have seen the majority of the subject matter tested on the MCAT throughout your coursework. This is essential for those who are looking to not take a gap year.

   Your ideal timing would be to prepare and take the MCAT during the summer between your 2nd and 3rd years. If you’re taking a gap year, you can pump the breaks on the coursework as your optimal timing would be the summer between your 3rd and 4th years, giving you a couple more quarters/semesters to fit in all the preparatory coursework.

**Begin To Get Involved. Choose What You’ll Invest Your Time And Energy In.**

1. Do what you’re interested in; don’t push so hard for “pre-med” centric activities. They have their place, but so does everything else. If you do what you enjoy, you won’t have to worry about your level of commitment or trudge through “just because medical schools think it looks good.”
Year 03 Theme:

Development & Elevation

OPTIMIZE. LOOSEN THE REINS ON YOUR EGO SLIGHTLY TO INCREASE YOUR MOST VALUABLE COMMODITY: TIME. 93% LOOKS THE SAME AS 100%. AN A IS AN A. TAKE THE TIME YOU SAVED ELSEWHERE.

1. Flow them into extracurriculars and build your application/story.
2. Become a leader, head a project, look to push your research forward.

Apply! Here’s A General Checklist:

1. Are you comfortable with your MCAT/GPA?
2. Clinical experience/shadowing?
3. Strong LOR’s?
4. Is your mental sound? Can you go straight through without feeling burnt out?
5. Are you proud of your extracurriculars? Can you speak to them in an interview?
6. How much more would 1 extra year help you?
Roller Coaster Year

It’s A Waiting Game. Wait For Your Time To Be Called. Prepare For The Interview Trail And Continue To Wait!

1. Enjoy the interview trail; don’t psych yourself out. You deserve to be there. You belong.

Grade maintenance. I wouldn’t drop your 3.7 GPA suddenly to a 2.9, but if it takes small hits here and there so you can relax/enjoy your senior year, then it’s well worth it. You’ve put in the work, medical schools have vetted you and you’re focused on killing the interviews. Whether your GPA is +/- 0.05 means little at this point.

REFLECT, You’re Going To Be A Doctor. How Does That Make You Feel? :) Again, this is a very general timeline that outlines some of the things you should be focused on throughout your undergrad years. Again, feel free to also ask questions specific to your situation via e-mail to either Nicolas and I or in our Facebook Group, so everyone can learn together! If you’re more of a visual learner, you can find this summarized graphically here.
MCAT AND GPA FOR MEDICAL SCHOOL APPLICANTS

My most important takeaway from this data is that you DO NOT have to be a perfect applicant (528 MCAT/4.0 GPA) to get into medical school. An interesting corollary is to think about why certain applicants (who may have 528 MCATs and a 4.0 GPA) DO NOT get into medical school!

Medical School Admission Statistics for UCLA Graduates Dashboards

It looks like the average accepted UCLA student has a lower GPA than the national average (which may be the admissions committees understanding the academic rigor here at UCLA). Use the UCLA specific metrics to get an understanding of where your school-specific peers are at with respect to their quantitative metrics.

Source: https://www.sairo.ucla.edu/2018-amcas
Which Major Should I Pick?

**DO I HAVE TO BE A LIFE SCIENCE MAJOR IF I WANT TO BE PRE-MED?**

A common misconception I would like to address is that you DO NOT need to be a biology major to be Pre-Med. You can pick any major you like, from engineering, to physiological sciences, to communications, to economics, wherever your interest lies we highly encourage you to pursue it!

**DO ADMISSIONS COMMITTEES UNDERSTAND THAT MAJORS LIKE ENGINEERING MIGHT BE HARDER?**

While many understand that some majors may be more difficult or require more time commitment, admissions committees do know this, however, when it comes to being compensated for a low GPA, the admissions committee will not take this lightly as there is a plethora of high GPA applicants also studying the same major you’re in. With this in mind, choose a major that will allow you to excel both in coursework and interest. I know some individuals who have majored in the “easy” majors of UCLA but were absolutely bored during their upper division courses. Choose a major you will enjoy while also being able to protect the GPA! A great way is to ask older individuals at UCLA¹ what they think of their major and if they would recommend given your interests. Another way is to meet with the department counselor of the major you are interested in.

**IS BIOLOGY THE BEST MAJOR?**

Although this is the most popular major among individuals who enter medical school as these fields of study go hand in hand, there are a significant amount of individuals who majored in humanities, sciences, and engineering. A convenient component of majoring in a life science major is that all the Pre-Med requirements are built in as lower divisions so no need to take any extra courses. Pre-med students often ask if a major in life sciences will help them do better on the MCAT, please be mindful that biology is only of the sections and you will also need a solid foundation in general/organic/

¹ Feel free to email me if you have any questions about Human Biology and Society (Nick) or Neuroscience (Michael) or any other major, if I can’t give you personal advice on that major, I can definitely connect you with someone who has done that major.
biochemistry, physics, sociology, psychology, and critical reasoning, majoring in different areas like Psychology, Biochemistry, or even philosophy can help with different sections of the MCAT.

CAN I MAJOR IN A NON-SCIENCE FIELD?
Yes you can and it might be the way to go! However, make sure you fulfill the basic course requirements seen below. It’s also good to research each school you’re interested in attending to see if there are additional prerequisite classes like biochemistry, or sociology. Make sure you make extra room in schedule (ie. taking 4 classes per quarter, taking summer classes) so you can finish college in a timely fashion. Another option is taking classes at your local community college, these will count for medical school as well.

WHAT PLACE DO HUMANITIES MAJORS HAVE IN MEDICINE?
I think demonstrating the promise that a person from a philosophy (medical ethics) or an anthropology (integrative medicine) background has on connecting with people (which is closer to medicine than all the signal transduction pathways you learn in Biology) would convince people on the fence of humanities/sciences that they should honestly study what they love.
REQUIRED COURSES

Most Medical Schools require the following. Below are the corresponding courses to fulfill the requirements.

- One year of Biology with Lab
- One year of General Chemistry with Lab
- One year of Organic Chemistry with Lab
- One semester of Biochemistry
- One year of Physics with Lab
- One year of Math

A. Biology (Life Sciences) Required:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Science 7A (Cell and Molecular Biology)</td>
<td>5</td>
</tr>
<tr>
<td>Life Science 7B (Genetics, Evolution and Ecology)</td>
<td>5</td>
</tr>
<tr>
<td>Life Science 7C (Physiology and Human Biology)</td>
<td>5</td>
</tr>
<tr>
<td>Life Science 23L (Introduction to Laboratory &amp; Scientific Methodology)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total Course Units</strong></td>
<td><strong>18</strong></td>
</tr>
</tbody>
</table>

Biology (Life Sciences) Recommended:

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Science 107 (Genetics)**</td>
<td>5</td>
</tr>
</tbody>
</table>

**Some schools may require upper-division biology courses, this would satisfy the requirement.

B. Chemistry Courses: Required for Life Science Majors

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem 14A (General Chemistry for Life Scientists I)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 14B (General Chemistry for Life Scientists II)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 14BL (General and Organic Chemistry Laboratory I)</td>
<td>3</td>
</tr>
<tr>
<td>Chem 14C (Structure of Organic Molecules)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 14D (Organic Reactions and Pharmaceuticals)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 14CL (General and Organic Chemistry Laboratory II)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 153A (Biochemistry: Introduction to Structure, Enzymes, and Metabolism)</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Course Units</strong></td>
<td><strong>27</strong></td>
</tr>
</tbody>
</table>
Chemistry Courses: Required for Physical Science Majors

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chem 20A (General Chemistry: Chemical Structure)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 20B (General Chemistry: Chemical Energetics and Change)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 20L (General Chemistry Laboratory)</td>
<td>3</td>
</tr>
<tr>
<td>Chem 30A (Organic Chemistry I: Structure and Reactivity)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 30B (Organic Chemistry II: Reactivity, Synthesis, and Spectroscopy)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 30C (30C - Organic Chemistry III: Reactivity, Synthesis, and Biomolecules)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 30L (30BL - Organic Chemistry Laboratory I)</td>
<td>4</td>
</tr>
<tr>
<td>Chem 153A (Biochemistry: Introduction to Structure, Enzymes, and Metabolism)</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Course Units</strong></td>
<td><strong>31</strong></td>
</tr>
</tbody>
</table>

C. Physics Courses: Required

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 5A (Mechanics and Energy)</td>
<td>5</td>
</tr>
<tr>
<td>Physics 5B (Thermodynamics, Fluids, Waves, Light, and Optics)</td>
<td>5</td>
</tr>
<tr>
<td>Physics 5C (Electricity, Magnetism, and Modern Physics)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Course Units</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

D. Math Courses: Required for Life Science Majors, pick either 3 series or LS series³

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math 3A (Calculus for Life Sciences Students)</td>
<td>4</td>
</tr>
<tr>
<td>Math 3B (Calculus for Life Sciences Students)</td>
<td>4</td>
</tr>
<tr>
<td>Math 3C (Ordinary Differential Equations with Linear Algebra for Life Sciences Students)</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Course Units</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

³Which series should I take? From my experience if you are debating whether to start a series, the 3 series is more relevant as it gives you in depth calculus knowledge which will be very helpful for physics and chemistry in the future. However, if you scored a 5 on the AP Calculus AB and BC test, the LS series would be beneficial so you can get the full year of math.
or

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>LS 30A (Mathematics for Life Scientists)</td>
<td>5</td>
</tr>
<tr>
<td>LS 30B (Mathematics for Life Scientists)</td>
<td>5</td>
</tr>
<tr>
<td>Stats 13 (Introduction to Statistical Methods for Life and Health Sciences)</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total Course Units</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

E. **English Courses:** Required 2-3 courses**4**

Any of the writing or “W” courses satisfy this requirement or English classes**6**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disability Studies 101W</td>
<td>5</td>
</tr>
<tr>
<td>English Composition 3</td>
<td>5</td>
</tr>
<tr>
<td>Aliens, Psychics, and Ghosts 51W</td>
<td>5</td>
</tr>
<tr>
<td><strong>Any other English/AP or IB test/ Writing/ Humanities writing course may be applied</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Course Units</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

F. **Recommended Courses****7**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psychology 10 (Introductory Psychology)<strong>8</strong></td>
<td>4</td>
</tr>
<tr>
<td>Sociology 1 (Introductory Sociology)</td>
<td>5</td>
</tr>
<tr>
<td>Humanities Courses (ie. Public Health, Philosophy, Ethnic Studies)</td>
<td>~4</td>
</tr>
<tr>
<td>Foreign Language courses (Spanish, French, etc.)</td>
<td>4</td>
</tr>
<tr>
<td>Ethics Courses (MCDB 60, MCDB 50)</td>
<td>5</td>
</tr>
</tbody>
</table>

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**4**The year of English requirement is a common held myth amongst pre-meds. Most schools will allow for English, Writing, AP/IB courses (from high school) or even humanities courses to count as English. Make sure that you do research into the schools you are interested in attending, each has different requirements.

**5**Worried that you’re not able to fit in 2-3 writing classes into your schedule, you can also enroll in a community college or university level course the summer before you start medical school if the school has a hardcore requirement.

**6**These are just recommendations!! Any of the classes will work!

**7**Again, these are just recommendations, refer to the schools you are interested in to see if any of these are requirements or heavily recommended.

**8**Highly recommend this course, it is its own section on the MCAT.
Preface

I would like to preface this section by stating that the most important parts of your application are MCAT and GPA. You could have the most amazing extracurriculars (ECs) in the world but if your GPA and MCAT are too low, your application will not get past the computer (which means automatic rejection due to GPA and MCAT cutoffs). However, your scores will only get you through the door. Suffice to say, there are way more people that get through the door than those who actually earn a seat. Your ECs is what will set you apart from other applicants. It represents your dedication, leadership, and teamwork skills that demonstrates you want to help people. For those that are visual learners, here is a helpful mind map. Thanks Michael!

https://www.mindmeister.com/1262270182?t=PEfG7AGagT&omnisendContactID=5d698f19a8046bb5f519841&omnisendScopeID=5cc242060853ed5a50b11735_2_7127367747
WHAT CONSISTS OF EXTRACURRICULARS (ECs)?

There are a variety of extracurriculars but I would break them down into 3 main categories that way you can become a well-rounded applicant. For the visual learners:

https://www.youtube.com/watch?v=rd8CJP-Gbyk&
https://www.youtube.com/watch?v=JGLhMv7XFil

1. **CLINICAL EXPERIENCES:**
   a. These consist of shadowing a physician or working in a hospital/clinic with patients
   b. Examples at UCLA: Care Extenders, Mobile Clinic, Flying Samaritans, Stroke Force/Team etc.

2. **NON-CLINICAL/SERVICE EXPERIENCES:**
   a. Any other volunteer or work experience not involving the hospital but greater community
   b. Examples at UCLA: Special Olympics, CPR and First Aid instructor, TEACH etc.

3. **RESEARCH**
   a. These could include basic science, translational, or clinical research

WHAT EXTRACURRICULARS WILL HELP ME FOR SURE GET INTO MEDICAL SCHOOL?

I wish there was a simple answer to this but there isn’t. Medical schools love to talk about diversity in their class and therefore, no same experience will allow for this to happen. The ECs you pursue should be the ones that will help you mature and grow as an individual. There are so many opportunities at UCLA to take advantage of. Unique qualities such as working with a team, communicating, or empathy are not learned from lectures in the classroom but rather through real situations!

WHAT IS A BIG MISTAKE PRE-MEDS MAKE WHEN PURSUING ECs?

I see this all too often. One is doing too many ECs to the point where you are burnt out and stretched way too thin. This will ultimately hurt your GPA but also you may come across as an applicant that has stacked their resume with nothing of substance.

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1. I will leave a detailed spreadsheet of clubs at UCLA at the bottom of this section
2. Basic science research -- often called fundamental or bench research—provides the foundation of knowledge for the applied science that follows. This type of research encompasses familiar scientific disciplines such as biochemistry, microbiology, physiology, and pharmacology, and their interplay, and involves laboratory studies with cell cultures, animal studies or physiological experiments. (Taken from AAMC)
3. Translational research -- a term often used interchangeably with translational medicine or translational science or bench to bedside – is an effort to build on basic scientific research to create new therapies, medical procedures, or diagnostics. (Taken from Wikipedia)
4. Clinical research -- is a branch of healthcare science that determines the safety and effectiveness (efficacy) of medications, devices, diagnostic products and treatment regimens intended for human use.

I fell victim to this during my second year, it’s important to prioritize mental health, I have tips for that in a later section.
Some advice I have received from medical students who have sat in on the admissions committees is to dedicate their time to one or two extracurricular activities and truly commit themselves to it. Take on a leadership role and help that program grow and expand. Leave the program better than you found it and push boundaries. Being passionate about one or two EC’s shows responsibility and commitment which are desirable traits as a physician and medical school applicant. Also, when interviews and secondaries come around, you have many relevant examples to turn too.

WHERE AND HOW CAN I JOIN ECs?

In the beginning of Fall and Spring Quarter, UCLA hosts an Enormous Activities Fair where individuals can see all the clubs available on campus and find out how to join! https://www.truebruinwelcome.ucla.edu/2018/48 this website might be outdated but search in “UCLA Enormous Activities Fair” on google and it should show more information.

Another great resource is Bruinwalk… as dreaded as that may sound, clubs are always advertising to join. Just pay attention to the “Pre-Med/Pre-Health”.

Ask older Bruins!!! They have great insight into their clubs and may be able to offer you extra tips for how to apply or interview for the club!

Also, I have compiled a database from one of my organizations. Feel free to reference it, it has a list of clubs and when they are recruiting.
Building Your Extracurricular Profile

A WORD ON THE CHECKLIST MENTALITY:
Checklists are truly helpful things. They can make sure we don’t miss anything on our morning routine and ensure that larger processes, like a plane taking flight, goes smoothly. Checklists therefore, are great for repeatable, formulaic processes. They don’t do so well when there are a series of variables/other factors that come into play. The Medical School Admissions process is a prime example of something that should not be taken from a checklist mentality. If so, you’d see every applicant with research, EMT experience, volunteer work, global health experience, etc. Instead, you see medical students passionate about power lifting and community health, whereas others are musical virtuosos who wish to combine art and medicine, and even still others who want to combine entrepreneurship with medicine. Successful medical school matriculants come in all different types of packaging. Stay true to the main tenets of medicine (e.g. clinical experience to ensure you understand what it’s like working with people, scholarly pursuits as medicine is a field that values lifelong learning, etc.) but otherwise, commit to things you truly love doing.

THE THREE PILLARS:
Your extracurricular profile can truly be as simple as doing things that you love doing and I fully encourage that. Should you want to be slightly more nuanced with your approach, I’d suggest an exercise I invented and coined “The Three Pillars.” Here, you identify three core parts of your identity that you want to express; in other words, what are three themes in your life. It could be something like ‘Emotional Expression,’ ‘Teaching/Mentoring’ and ‘Active Lifestyle/Nutrition.’ Because these three things are important to you, you’ll likely have extracurriculars that fall into each pillar. In this case, perhaps you run a successful blog as an outlet for your emotional expression. For teaching/mentoring, you could be the Internal Vice President and lead an internship program.
and for Active Lifestyle/Nutrition, you could be a part of a powerlifting team on campus. An interesting expansion of your extracurriculars would then be to find activities that combine your pillars. Perhaps you’re in a program that counsels patients to lose weight, satisfying both your ‘Teaching/Mentoring’ and ‘Active Lifestyle/Nutrition’ identities. Or maybe you become a director for a cultural night performance, hitting your ‘Emotional Expression’ and ‘Teaching/Mentoring’ pillars. This three-pillar structure forces you to engage only in activities you intimately identify with and also allows a nuanced way to combine your interests.

For a general overview of extracurriculars and why they’re important in the admissions process, please see this video.
How To Join A Lab/Get Involved In Research?

By this point you may have realized that UCLA is a public school, which means no one is going to give you anything…. You have to go out and get it! My great mentor, Dr. Nicholas Bernthal, always said that UCLA has incredible resources, you just have to learn how to navigate it. I hope this manual is helping with that.

WHEN SHOULD I JOIN A LAB?

First and foremost make sure you have a schedule that allows you to succeed. Ensure you are able to work at anywhere from 10-15 hours. Joining a lab when you’re trying to study for the MCAT or take multiple hardcore science courses may not be the best time.

The best time to apply to a lab would be spring quarter as many individuals are transitioning out of lab for graduation or other reasons. Any spring quarter would be great, I would recommend your first year or second year spring quarter.

HOW DO I JOIN A LAB?!

There are two ways to join a lab that I explain to all my mentees. One goes by the saying, “Know where you want to go and make sure the right people know about it.” If you have older Bruin friends that maybe 4th years, specifically in the winter or spring quarters, I would ask if they have any openings or future openings in their lab. Considering your friend is a 4th year and about to graduate, that lab has an open spot and that could be your ticket in!

In addition, getting recruited from a friend is essentially a recommendation from someone you know, this is critical and they will make you look good to the Principal Investigator (PI or boss of the lab)! You can also gain some insight into what research their lab does. Joining other hospital or pre-medical clubs is a great place to be in to ask older Bruins!

The other way is through mass emailing. I would search through the http://www.ugrearchsci.ucla.edu/findmentor.htm and go to the Undergraduate research portal which is located on MyUCLA under the “academics” tab. On this site is where faculty post lab positions.
I would also browse departmental websites (www.ucla.edu/academics/departments-and-programs) and search through the faculty and browse through their research interests. If their interests align with yours shoot them an email.

**Michael here:** one other pathway in is an established research pipeline that UCLA offers. It’s called the Biomedical Research Minor and I personally loved my time with that department. It is for people who want to incorporate scholarly pursuits throughout their career and so there is a lot of dedicated time polishing your writing/presentation/analytical skills, so please do be wary if you’re not aware whether you want to be completely gung ho when it comes to research.

The minor is a big commitment and it will be difficult to push through if you’re not passionate about research (many people aren’t once they’ve realized just how many hours they spend pipetting/with mice/imaging, etc.). If you have specific questions, feel free to shoot them my way!

**HOW DO I CONTACT A POTENTIAL FACULTY MEMBER?**

Congrats you found a potential faculty member you would like to work with! In your email, you should introduce yourself and inform them about your purpose of contacting them.

**Make sure to include:**

a. Name/Major
b. Purpose for contacting them (ie. I want to conduct research in your lab)
c. Major research interests and enthusiasm for gaining research experience
d. How does your research align with what the lab is currently researching?
e. Include contact information (email, phone, etc.)
f. Attach a CV/resume.
   - I have attached a sample CV through UCLA’s example: [http://www.ugresearchsci.ucla.edu/pdfs/Sample%20CV%20June%202007.pdf](http://www.ugresearchsci.ucla.edu/pdfs/Sample%20CV%20June%202007.pdf)
g. Available dates for interview

**EXAMPLE OF SAMPLE EMAIL:**

Dear Dr. ______________,

My name is ________, and I am a first year undergraduate majoring in Psychobiology. I am intrigued by the research your lab is conducting, I have read the description of your
lab’s research and I am writing this email to express interest in joining your lab and possibly engaging in an SRP contract.

I have long been interested in neuroscience research, though I have yet to do any myself. Having a close relative who suffers from ADHD, I would love to learn more about effective methods of improving training attentional control, and perhaps even start a project of my own in the near future. I am extremely eager to learn and engage in the intellectual atmosphere of research.

I would greatly appreciate the opportunity to meet with you to discuss projects in your laboratory, and the possibility of an SRP contract in Summer Session A (or Summer Session C or Fall if there are no more Session A positions). I am available next week Monday (June 27th) 9:30-11 and after 4 pm; Tuesday after 2 pm; and Thursday 2-6 pm. If any of these times do not work for you, let me know what days and times do, and I will adjust around your schedule. I have attached my curriculum vitae as well, for you to review at your leisure.

I look forward to hearing back from you and I hope you have a nice weekend.

Sincerely,

__________

HOW MANY FACULTY MEMBERS SHOULD I EMAIL?

You should email at least 10-15 faculty members. The reason for this is because PI’s receive hundreds even thousands of emails a day. My PI receives 1600 emails a day!!! You may not receive a response from everyone you email or may even receive rejections. The key is to stay tenacious and persistent! If you do not hear back from the faculty member in a week send a follow-up! I have heard from PI’s that they appreciate the follow-up, this shows that you are seriously interested in joining the lab.

HOW DO I PREPARE FOR A RESEARCH INTERVIEW?

Congrats on receiving the interview! You are one step closer to entering the exciting field of research. Make sure you are on time and are in nice-looking attire. You do not have to go business casual but please try to look fairly presentable. Make sure you do further research on the PI your interviewing such as looking at their previous publications and reading the abstracts. All you have to do is go to https://www.ncbi.nlm.nih.gov/pubmed/ and type in the PI’s first and last name.

*My great friend back home emailed his PI 6 separate times before he received his offer. He stuck with it and has presented in Florida and is on the way to finding a cure for a cardiac disease!*
This will allow you to get a better understanding of the research they are conducting!

Also make sure you come prepared with questions such as:

a. Who will be supervising/mentoring me?

b. What type of research and projects you will be working on?

c. Make sure that you are participating in the research not just a technical assistant washing plates or cleaning the lab.

d. How many hours are expected to work per week and how flexible are the hours during midterm/finals seasons?

I landed the position are there any other things I need to do? YES! Here I will talk about the cheat code/secret to UCLA.

Amazing job getting the research position! You will need to fill out an SRP contract, this will give you units for the research and hours you are doing! You can get pass/fail 1-2 units through SRP 99 contracts. The cheat code to UCLA is that SRP 199 you can receive 2-8 units of letter grade. Yes, that is correct, you read that right! LETTER GRADE. If you are in a science lab this will count for BCPM or science GPA and you can get up to 32 units of upper division units. I know, this is incredible, I didn’t know this until the beginning of my second year and I wish I could have known sooner.

Here are the steps needed to complete an SRP contract. Make sure to do so within the first two weeks of the quarter or else you may have to pay a fine to Murphy Hall :-) 

http://www.ugresearchsci.ucla.edu/srpcontracts.htm
Letters of Recommendation (LOR)

Congrats on making it this far in the manual. For those of you getting ready to apply, I applaud you, you’re at the final steps! For those of you who are looking and planning ahead for the future this also very important!

**HOW MANY LORS DO I NEED? AND WHO DO I ASK?**

Almost all medical schools require letters of recommendation, usually around three to five. This portion of the application is extremely variable and requires research to be done on each institution. A general rule of thumb is at the bare minimum, two science or BCPM professors\(^1\) (ie. any Biology, Chemistry, Physics, or Math professors) and one non-science professor (ie. History professor). I would recommend obtaining additional letters from practicing M.D.s, volunteer supervisors, employers, or PI’s etc.

You should try to think of every professor and supervisor as a potential letter writer, this will give you the motivation to study harder and also attend office hours. As you get further along in the quarter, you may realize that you want this individual to write you the letter and since you have been going to office hours this may lead to an opportunity to ask them.\(^2\)

**SHOULD I ASK A PROFESSOR I DO NOT KNOW THAT WELL?**

In general it is better to have a professor that knows you and can attest to examples of your intellectual capacity. Do not ask a “big name” professor just because they have a fancy title, it is better to ask individuals that can write something personal and special about you. If they can make you walk on water then you’re getting the right letter written about you!

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\(^{1}\)Protip!! If you are in a science lab at UCLA, your principal investigator or PI counts as a science professor. It is essentially a 2 for 1 as they can attest to your science and laboratory skills.

\(^{2}\)Another way to get close to professors other than research and office hours is the Learning Assistant and Peer Learning Facilitator programs. These allow you to work weekly and meet with the professor allowing to establish a close connection.
DO I MEET IN PERSON OR OVER THE PHONE TO ASK FOR THE LOR? ALSO, IS THERE ANY INFORMATION I SHOULD PROVIDE THEM?

It is generally better to ask in person, feel free to set up a meeting with the professor via email or wait until the end of office hours to ask. Make sure you ask for a “strong letter of recommendation” that way you keep each other accountable that you are receiving a good letter for your application and the professor is comfortable doing that.

With regards to information, even if the professor knows you very well, they may still request more information. Be ready to provide a CV/resume, transcript, and oftentimes a personal statement if you are applying. It does not need to be final draft version but a rough draft will do that way they can tailor the letter to your ambitions/goals.

Say for example you took LS3 during your sophomore year and you want the professor to write you a LOR, it doesn’t make sense to wait until senior year! The professor may forget you with the interactions they’ve had in that long time considering they teach over hundreds of students. The best time to ask would be at the end of the quarter or a few weeks after you received your grade (it’s better to wait until you received your grade). If you are asking a supervisor or employer, it is better to ask towards the end of your time with the organization.

If you have obtained a letter earlier than anticipated and do not need it, you can use a storage service such as https://interfolio.com (interfolio) which will store and send the letters to AMCAS when it is time to apply. UCLA does not have a letter service so I would recommend this one, it is very intuitive and is free to store letters.

HOW MUCH TIME SHOULD I GIVE TO MY LETTER WRITERS?

A good rule of thumb is 3-4 months before your application is due. If you are planning to apply in June, then March should be the latest you ask for a LOR. Other students will also be asking for letters and asking late puts unnecessary pressure on the letter writer.

DON’T FORGET TO WAIVE THE RIGHT TO SEE YOUR LETTERS.

The AMCAS application will ask to waive the rights to the letter so it will let your letter writer write as honestly as possible.
HERE IS THE LOR REQUIREMENTS FOR EACH SCHOOL. THIS IS THANKS TO REDDIT.¹⁷

²If this manual can’t answer all your insightful questions, reddit definitely can! A great resource to use to answer all your pre-med questions! Just go to https://www.reddit.com/r/premed/

https://docs.google.com/spreadsheets/u/1/d/18Gsg6-SBETC1Z1w4R3DlAEu7DqK5DHPxaXkE/edit?usp=sharing
There are plenty of in-depth Personal Statement guides out there on the web, so we’ll stand by those and use them as support for this piece.

**Medical School Personal Statement Guide:**
1. I personally know the author of this blog (Shirag Shemmassian is a UCLA Alum himself) and his long-form articles are truly gems in this space. A couple of highlights that I’d like to parlay onto our guide:
   a. The personal statement is one of the few opportunities you have to demonstrate your personhood, who you are beyond your GPA/MCAT and listed activities on your resume. Arguably more important, it’s the single space where you can be explicit about why you want to become a physician. As such, it is a key differentiator amongst the hundreds of thousands of applicants that apply to medical school each year.
   b. This blog post offers a step-by-step approach to writing your medical school personal statement. Everything from what to write about to how to tie it all together is touched on in detail and supported with examples of what and what not to do!
   c. There also is an analysis of a full-length personal statement that earned admission into a top-5 Medical School
   d. Lastly, there are other examples for you to gain inspiration from but if you’d like more to read, you can also check out this resource from the Health Careers Advising Center from the University of Pittsburgh (downloadable)

**The Premed Playbook:**

**Guide to the Medical School Personal Statement: Write Your Best Story. Secure Your Interview**
1. Dr. Ryan Gray has been in this space for a long time now and has written more than one book on the medical school admissions process. It’s a long read and definitely will be a surefire resource when you’re drafting your own narratives!

**Essays That Will Get You into Medical School**
1. I personally used this as a resource when writing my own personal statement! It gives different sets of personal statements indexed by people of different backgrounds. As someone who wanted to bring out the features of my educator/community-
centric/Asian Pacific Islander interests, it was helpful to see how other people wrote about similar portions of their own identities.

You’ll most likely benefit from assistance tailored specifically to your story. If you’re at that point, always feel free to reach out to us! If you’re not quite there yet, it surely will help to think about portions of your identity you’d like to highlight and ensure that the years before you apply to medical school, you’re engaging in activities that support that identity.
Nick’s Thoughts on Handling the Stresses of College

Imposter syndrome is very real and affect many students on this campus. I would like to share my perspective serves to call for awareness, advocacy and acknowledgment of many students who share similar challenges in academia. Here is a sample of an opinion editorial I wrote for the Daily Bruin:

“As a Latinx student, I find myself, along with many other students of color, having to conquer more than weekly problem sets and quizzes. We consistently fight for the respect and approval from peers and faculty that we belong on campus. And we fight off discrimination in our everyday lives while also struggling with impostor syndrome – when an individual feels like an intellectual fraud when they have achieved success in rigorous situations.

During my first two years at UCLA, I experienced many preconceived expectations from certain peers and faculty. I heard comments such as, “Nicolas, you are the first smart Mexican I have ever met,” or even had a teaching assistant triple check that I received the correct score because he could not believe that I could have received the second highest grade in the
class. These experiences made me feel like an impostor and believe each time I succeeded, it was luck and not the hard work I put in.”

If this resonates with you or you would like to read more, here is the link for the article: http://dailybruin.com/2019/04/02/op-ed-for-students-of-color-impostor-syndrome-can-add-to-the-challenge-of-college/

Dealing with these stresses took a toll on me but it was through support groups and being in AAP study groups that helped manage these stresses. It is important to recognize that you belong at UCLA, there is a reason you were granted acceptance and although it may not feel at times that you don’t deserve to be there you do. You were chosen out of thousands of applicants and you have the opportunity to do something special and amazing with your education.

For me, being apart of the Academic Advancement Program helped me tremendously. Here, spaces were created where I could share and contextualize my experience of being a person of color. Racism is still well and alive in the U.S. and I believe that sweeping it under the rug is not the best solution to this problem. Rather, acknowledging the problem is the first step to solving the problem and it is through these support groups in AAP that I realized I was not alone. I could talk about the micro-aggressions we each experienced but also how we could use our experiences to grow stronger and learn from them.

Nicolas outlined the imposter syndrome and his experience with it and from my limited experience working within AAP for the better part of 2 years, that is primary struggle we face. If I had to add a couple of other things I’d say:

Michael’s Thoughts on Handling the Stresses of College

1. Surround yourself with those who understand your struggle
   a. It’s easy for people to dismiss your concerns, especially if they’ve been through the same things and have made it to the other side. They’re not trying to ignore you and your growing pains, they’re simply trying to comfort you by simply showing you (through themselves) that everything will be okay. While it certainly will be okay (you will make it through), this type of advice can feel distant and not effective, especially if you’re living within the struggle. As such, surround yourself with those in your position. They will be first responders to any crises you may have and serve as a collective backbone going into the future. This support network is extremely important, because it reaffirms what you already know in your head: “you’re not alone.”

2. Mentors
   a. Experience can be life’s greatest teachers. Isaac Newton famously said: “If I have seen further it is by standing on the shoulder of giants.” Lean on these resources when you can; they can save you a great deal of growing pains with everything from knowing what professors teach with clarity to whether you should read MCAT prep books from cover to cover before you start practice exams (the answer is an emphatic no).

3. Keep your health
   a. For the most part, students are one resilient bunch. Life only goes south when two/three things pile on top of each other and capitalize on each others’ viciousness. It’s only when the finances are thin, the family is fighting and the courses are slightly tougher that students break down and become overwhelmed. Many of these things you can’t control and so you’ll have to learn to ride the waves when they come.

   One factor you can control is your health. Keep it optimal; you can control that. Exercising, eating right and sleeping a healthy amount will do wonders for your productivity, your social interactions and your overall happiness. Treat your health as a priority and it will pay its dividends. I promise you that.
Closing Remarks

NICK

Hi again! It’s Nick here! and I would like to thank you for reading (or skimming) through this manual, we hope it serves you well and answers many of the questions/provides an outline of the road ahead. With that being said, there will be many questions or areas of the unknown that may not be covered in this manual but we encourage you to use this as framework and guide you to other resources (including us!!) that may have the answer to your question. We know this manual isn’t perfect (as this is our first edition) but we are looking forward to writing the next iterations in the upcoming months/years.

Most importantly, you’re never alone on this adventure through UCLA, this is just the beginning with many opportunities to make an impact, a difference, and overcome adversity with the ultimate goal of growing. Michael and I are excited to hear from you and please feel free to reach out to either of us, we are here to serve and help you on your journey! Please look out for us in Campbell Hall and our future upcoming workshops!

With much love,
Nicolas (Nick) Cevallos
Michael

And with that, our introductory manual comes to a close! Nick and I poured hours of work to convey our 4 years of experience into writing. Of course, everyone learns differently and our mission is to build the largest community of pre-med advising nationwide. To do so, we want to get to know the people that we’re helping and so, please reach out to us with questions you want answered, workshops you want hosted and meetups that you want to make a reality! We hope to digitize all of our conversations to help subsequent generations and our content will only be as good as the questions you ask. We hope that we’ve written in a way that makes us genuinely approachable and removes ANY and ALL barriers to shooting us an email to get that follow up conversation going. Welcome again to UCLA and we’re so happy that you’re here. More than that, we’re beyond ecstatic you’ve chosen the best career possible (a tinge of bias is indicated, but that’s okay). Stay true to yourselves and mature to be the people that you want to be. We’ll help you take care of the intangibles of attaining an acceptance into medical school so you can be the athletes, best friends, musicians, etc. that you also are! Medicine is NOT your entire life, so please lean on us when you need to. We’ll be here. :)

Yours Truly,
Michael Minh Le

A Student Who Sat In The Same Seats You Did Just Last Year