

The Atlas

**A resource for 3rd and 4th years
in the Immersion Phase**



2016-2017

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The Atlas: Part I

Introduction to the Immersion Phase

This section provides an overview of Immersion Phase course requirements, including Learning Communities and Foundations of Healthcare Delivery courses. It serves as a guide to planning and scheduling your next two years in the Immersion Phase.

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Course Requirements

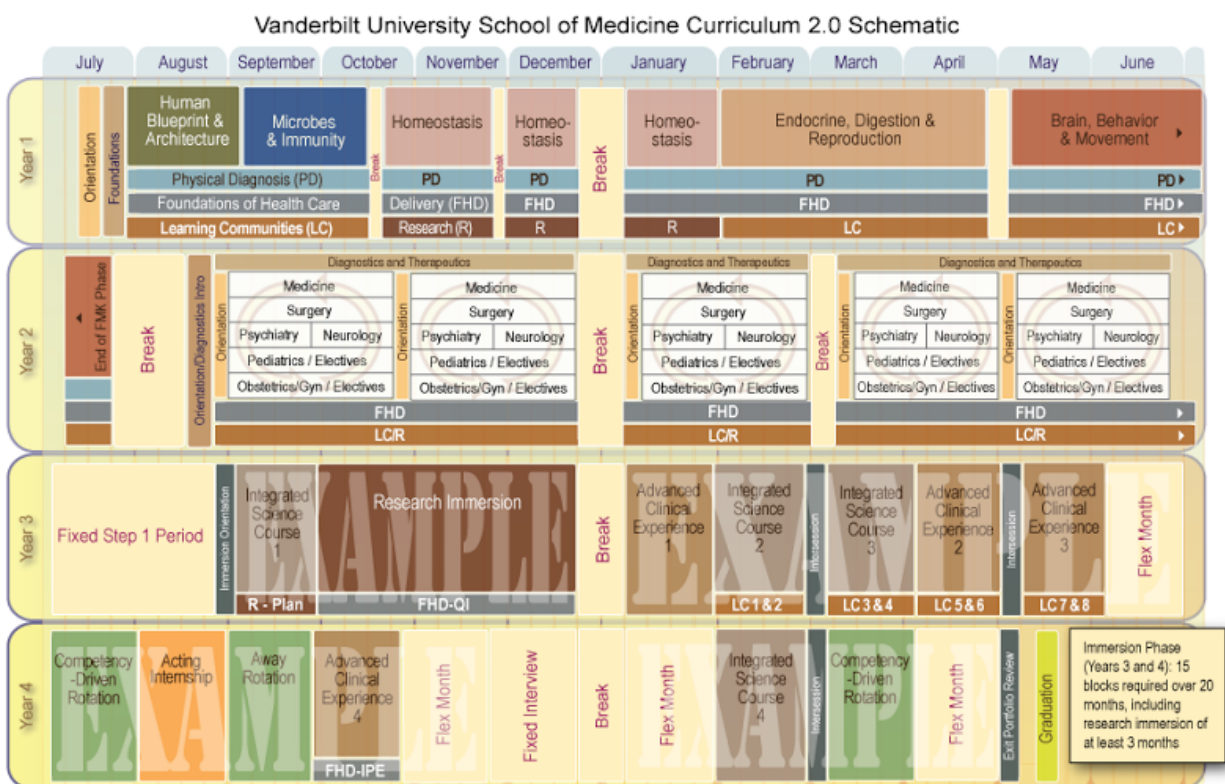
Current course requirements in Curriculum 2.0 include 4 Integrated Science Classes (ISCs), 4 Advanced Clinical Electives (ACEs), 3 months of research, 11 FHD courses, and 8 Learning Communities courses. In addition, students must take at least one ACE/ISC that qualifies as Primary Care and one ACE/ISC qualifying as Acute Care.

Nate Friedman, Julian Genkins, and Ben Theobald have created a very helpful template to help with course scheduling during the Immersion Phase. The links for each graduating class can be found here:

[Class of 2017](#)

[Class of 2018](#)

An example schematic of your four years in Curriculum 2.0 is below:



- Schematic current as of February 2016

Longitudinal Courses

In the Immersion Phase of Curriculum 2.0, students are expected to complete a total of 8 Learning Communities (LC) courses and 11 Foundations of Healthcare Delivery (FHD) courses.

When considering when to take your LC and FHD courses, it may be helpful to think about whether you will be able to or have enough time during your elective to complete the

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requirements for the class. For example, if you are interested in Neurosurgery and want to focus only on the rotation during the month, it may be a good idea to avoid taking LC and FHD courses during your Neurosurgery ACE and take them in other months instead.

Learning Communities (LC)

There are two types of LC classes, courses that require individual preparatory work and those that require small group preparatory work. The classes are listed below:

Individual Preparatory Work

LC 1 - Applied Ethics

LC 3 - Situational Leadership and Diagnosing the Situation

LC 5 - Priority Setting

LC 7 - Dealing with Uncertainty

Small Group Preparatory Work

LC 2 - Motivating Others

LC 4 - Problem Solving

LC 6 - Change Management

LC 8 - Leading and Managing Up

Two LC classes are offered each month throughout the year on a rolling basis. Students may take one, two, or no LC classes in each month. LC courses typically meet on the 3rd Monday of each elective month. Students will receive one grade for the entire LC course (8 sections), graded Pass/Fail.

Foundations of Healthcare Delivery (FHD)

There are a total of 11 FHD courses, split into 4 blocks, that students must complete during their Immersion Phase. Students may only take one FHD course each month. FHD courses typically meet on the 4th Tuesday of each elective month, although these times may vary depending on the course. More information about FHD during the Immersion Phase can be found on the [Vanderbilt website](#).

The Road to Residency

It can be daunting to think about how to plan the next two years of your life. Here are a few things to keep in mind when planning out your schedule.

Step 2

When signing up for Step 2, it is important to start early because spots may fill up quickly. It is particularly hard to find times when scheduling CS; CK is less difficult. Start looking at least 4 months in advance.

There are two components to Step 2: Clinical Knowledge and Clinical Skills. The Clinical Knowledge assessment is a 9-hour computerized multiple choice test, similar to Step 1. You will schedule Step 2 CK the same way that you scheduled Step 1, via the [NBME website](#). The Clinical Skills portion is only offered at 5 test centers in the United States: Atlanta, Georgia; Chicago, Illinois; Houston, Texas; Los Angeles, California; and Philadelphia, Pennsylvania. You

will need to travel to that location, and the exam basically takes the entire day, so be sure to think about your course schedule when setting a CS test date.

Scheduling Step 2 CK within the Immersion Phase

- Most students take 2 - 3 weeks to study for Step 2 CK. In particular, Emergency Medicine and Primary Care are a couple of classes that students report are very useful for studying. Some students choose to take a flex month to study and then take the test, while others studied during their free time on the Primary Care, Radiology, or other elective. In general, most students feel that taking a flex month is the best way to prepare for Step 2.
- About $\frac{1}{3}$ of residency programs require CK to rank for interviews. It is recommended to take Step 2 CK before July of 4th year so that your score will be available by September 15.

Scheduling Step 2 CS within the Immersion Phase

- It is recommended to take Step 2 CS soon after taking the CK portion.
- Because some programs use CS to rank their interviewees, it is advisable to take Step 2 CS by November of 4th year so that your score will be available by February.

Recommendation Letters

Depending on the specialty you choose (see [Part II](#)), the number of recommendation letters you will need varies, but in general, you will have four letters: one from the department chair or other prominent faculty member in your department, one from your research mentor, and two clinical letters (at least one of which should be from an upper-level ACE or AI). It is best to request letters from those who know you best, so make sure to spend time getting to know faculty members in the specialty of your choice, even outside your AI.

Who to ask

In general, you should ask for recommendation letters from attendings (not fellows or other staff) who you worked with clinically. Generally, the higher their ranking within the department, the better. But keep in mind that a higher ranking does not outweigh you working with them directly. The one exception to this is getting a letter from the clerkship director, who often knows you well enough to write about you even if he/she did not work with you clinically.

When to ask

Ask at least 1 month in advance of when you want the letter to be completed. Letters should be completed by September 15 of your 4th year. If you are going to ask for a letter from someone you worked with on your AI, request the letter very soon after your AI so that your performance is fresh in the letter writer's mind. This way, you have a better chance of getting a more meaningful letter, not just a summary of your CV.

How to ask

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If you have a good interaction with an attending clinically, it may be a good idea to keep in touch with them (have coffee, etc) after your rotation. This will make it easier for you to ask them for a letter when the time comes.

Letters can be requested in several ways. For specialties such as Internal Medicine or Pediatrics, it is often recommended that you set up a meeting and request the letter in person. You should bring your CV to this meeting. If you are at all worried about the kind of letter a faculty member will write you, ask them if they know you well enough to write you a strong letter. For other specialties, the faculty member may or may not have time to meet with you.

Regardless, it is recommended to request for the letter in person, either while you are in clinic or in the operating room with the faculty member. Then, you can determine if the faculty member would like to meet with you about the letter or simply would like you to email your CV to him/her.

OK, I've got someone! Now what?

Once a faculty member agrees to write a letter of recommendation for you, you need to provide them (or their secretary) with a letter request form from ERAS. These are PDF documents which you will generate on ERAS by inputting the faculty's name, title, etc. Generate and send these to your letter writer and/or their secretary as soon as you can, so as not to delay the process.

Letters will be uploaded by your letter writer via this portal: [ERAS Letter of Recommendation Portal](#). They cannot be uploaded until you have an ERAS token, which starting in 2016 was offered in February.

Remember to start early!

Be sure to ask for your letters early (i.e. ask for letters early, provide the faculty member with the ERAS letter request form as soon as possible, and remind your letter writer if he/she has not submitted the letter within a reasonable time frame)! Unfinished letters of recommendation are a common cause of applications being submitted late. This delay, even if less than a week, may prevent you from receiving interview invitations which you would otherwise receive.

Away Rotations

Whether you should do an away rotation at all is largely determined by which specialty you are interested in. It is almost required in some specialties, like Emergency Medicine and Neurosurgery, while it is less important for others. For more information about your specialty, see [Part II of the Atlas](#) for advice specific to certain specialties.

Reasons to do aways

- It's required for your specialty.

- You really want to go to that school (your significant other lives there, your family lives there, etc) and you want to make a good impression
- You want to see if the city/area/program is a place you want to live for a few years during your residency training.

Remember that the entire process is an interview, from the initial application through any contact afterwards, so be on your game.

Scheduling

Most people do aways between July and October of their 4th year. It is generally not recommended to do an away after November of 4th year because this starts to get into interview season, and it is a bad idea to leave for interviews during an away. A handful of schools offer aways in April, May, and June of 3rd year. These are great for Vandy students because there aren't as many people applying for them (since most schools are still doing clerkships 3rd year). This can help you look really good while on your away and have an easier time getting into the away rotation.

Students have had difficulty aligning Vanderbilt's Immersion Phase calendar and the calendar of other institutions. Be sure to look at these dates carefully for the program where you are interested in doing an away. *You may need to take a flex month adjacent to your away month to facilitate the scheduling.* This could also be coupled as time to study for Step 2.

It is recommended that you do the ACE for your specialty at Vanderbilt first before you do your away rotation at another institution.

Interviews

Should I take time off to interview?

After spending countless hours and energy working at the hospital and studying for exams; after finally picking the right specialty; and after going through your ERAS application a million times, you have one last obstacle between you and residency – the interview. Interview season is exciting, stressful, and time-consuming (as well as cash consuming...). This is your last opportunity to make a good impression, and it is an opportunity to learn more about different residency programs. You don't need to be distracted and exhausted from other obligations if you can help it. Therefore, ***YOU SHOULD TAKE FLEX TIME FOR INTERVIEW SEASON.*** (Of note, Curriculum 2.0 recently changed so that December of 4th year is a fixed flex month for interviews).

However, once you have decided to take time to interview, other questions arise such as "How many months should I take?" and "Which month(s) should I choose?" We surveyed the 2016 graduating class, and students applying to 15 different specialties responded. The results are shown here:

General responses:

Question	Answer
Should students use flex months?	100% Yes
How many flex months should be used?	0% 1 month 85% 2 months 15% 3 months
Which month(s) do you recommend students take off for interviewing?	5% October 85% November 100% December 30% January 0% February

Specialty specific responses:

Specialty	How many flex months?	Which months?	Comments?
Child Neurology	2	November & December	
Emergency Medicine	2	November & December	"Schedule interviews as early as possible to avoid many in January, and have more time after completing them to think/discuss with your mentors/second look if you want, prior to ranking deadline."
Family Medicine	2 (67%) or 3 (33%)	100% November & December; 33% October	"Earliest interviews were offered Oct 12, latest ones Jan 12. I was able to fit all of my interviews in 3 months Oct-Dec." "Interviews will start mid-late October and go through January."
Internal Medicine	2	November & December	"I tried to take Research during November, and there was just no way to get away with it... just be warned!"
Med-Peds	2	November & December	
Neurosurgery	3	November, December, & January	"Neurosurgery interviews constantly through Nov-Jan. There are interviews every week all across the country. There are a few in October and February but they definitely don't need to flex those months. Flex in November-January is almost mandatory."
Ophthalmology	2	November & December	

Orthopedic Surgery	2	November & December	
Otolaryngology (ENT)	2	November & December	"November also has interviews, so students need flexibility in November as well." "Take Neuroradiology or an easy elective in November if there are any early interviews."
Pathology	2	November & December	"Pathology interviews tend to be very early. I only had 2 interviews in January (there were dates in Nov/Dec, but they filled up)."
Pediatrics	2	November & December	"I used December and January, but somewhat wished I had put more interviews in November instead of January." "Also, take a light course in January for any additional interviews that must be scheduled during that month. Alternatively, students could take a light course in November and use flex months during December and January. Pediatrics tends to have a lot of dates available when scheduling interviews, so it shouldn't be too hard to group interviews primarily into 2 months."
Psychiatry	2	November & December	"Psych interviews are increasingly extending into Jan, so highly recommend to either take that month off as well or schedule a lighter rotation."
Radiation Oncology	3	November, December, & January	
Radiology	2	November & December	
Urology	2	November & December	"Possibly October as interviews start late October, Interviews are mostly Friday/Saturdays in October."

Timeline to the Match

The [CiM website](#) has a great calendar that outlines the Pathway to Match.

January 26, 2016 (second half of third year): Introduction to March Workshop

February 2016: Begin selecting [faculty advisors](#) and schedule initial and follow-up visits with them.

April 2016:

- Write curriculum vitae (CV) and begin working on personal statement.
- Send your college mentor your CV and personal statement via email for review prior to your MSPE appointment.
- Arrange MSPE interview with the Associate Dean for Medical Student Affairs - do this early and have CV and personal statement ready by time of interview.
- Upload your "Unique Characteristics" to the MSPE online system no later than 2 weeks prior to your MSPE appointment.
- Begin gathering residency information - see "Getting Started"
- Military match -- check deadlines, even if applying for deferments.

June - August 2016

- Research residency training programs through AMA's FREIDA or the ACGME.
- NON-ERAS applications should be sent to programs prior to their stated deadline. Each program sets its own deadlines.
- Arrange to have faculty letters of recommendation written and submitted through ERAS website.

June 1, 2016

- San Francisco match for ophthalmology - Central Application Service (CAS) registration opens.

June 2016

- Electronic Residency Application (ERAS) Workshop
 - Discussion on registering tokens and using your previous AAMC login
 - An overview of ERAS software, including reference materials and helpful hints
 - Discussion of various milestone dates and action required on or before those dates
- Registration for 2017 Urology Residency Match opens
- Registration for ERAS opens for all applicants.

September 2016 (start of fourth year)

- National Resident Matching Program (NRMP) information and registration available online. Everyone except Oral Surgery students must join the match.
- ERAS Post office opens for applicants, schools and programs to submit and receive applications.

- Read over MSPE to correct any errors.
- For ERAS applications, submit ON SEPTEMBER 15TH!! Many programs give interviews on a "1st come, 1st serve" basis. Even a few days to a week delay can make a huge difference in interview invitations.
- Depending on specialty, you may start to hear back about interviews in late September. Make sure that your email is synced to your phone so that you can respond to interview offers with your confirmation and preference in date as soon as possible. If you are on busy rotations in September - November, it may be a good idea to ask a family member or friend to help you respond to these emails. Just make sure to provide them all the information that they will need.

September 2, 2016

- Early match target date for completion of the Central Application Service (CAS) for the San Francisco Match for Ophthalmology

September 15, 2016

- National Resident Matching Program (NRMP) registration opens.

October 2016

- For some specialties, the bulk of interview offers will go out this month. For others, interview offers will just start going out this month. Do not be stressed about interview offers early on. More than likely, with some patience, you will have more interviews than you need. However, if you are ever worried about number of interviews, make an appointment with Dean Fleming to discuss your situation.

October 1, 2016

- MSPEs are sent through the ERAS post office to the programs

October 2016 – January 2017

- Interviews!

November - December 2016

- Submit application for extra loan money if needed for interviews and/or relocation. Applications are available in the Financial Services Office, 303 Light Hall.

December 2016

- Results of military matches/deferments announced.

January 2017

- Rank order lists due for ophthalmology and urology. Check each match for specific dates as they are also announced in January

February 2017

- Deadline for Applicants and Programs to enter Rank order lists on the NRMP- R3 web page

March 2017

- MATCH DAY! Results of NRMP are announced at 11:00 a.m. CST. This event takes place in Langford Auditorium. Bring \$1 for the Fishbowl (the last person called receives all the \$\$\$!) and plan to attend the reception afterwards.
- Remember to celebrate afterwards at Cadaver Ball!

March - April 2017

- Hospitals and programs send letters of appointment or contracts to students matched at their institutions.

May 2017

- Graduation!

What if I am undecided?

At this point, you've completed many acronyms (PD, FMK, FCC, CCX/VPIL, and parts of FHD & LCs) and conquered Step 1. All you have to do now is decide what field of medicine you want to practice for the rest of your life. Easy, right? There are some who knew they wanted to be a pediatric neurosurgeon who focuses on craniosynostosis before even finishing high school. But for many of us, we came into medical school with no idea which specialty was right for us. If you are in the latter category, know that (1) this is completely okay and normal, and (2) Vanderbilt is the best place to find the right specialty for you. Below are some suggestions to help you figure things out.

Seek guidance early!

- Utilize the awesome faculty at Vandy to help you think about your specialty interests and plan out your rotations.
- Meet with Dean Fleming to discuss the specialties that you are thinking of, the type of career path that you want, and any concerns you may have. She is a terrific resource and has a great deal of experience with helping students find the right specialty. If you are between two or three specialties, she can direct you to faculty in those fields and help you construct your schedule in a way that allows you to get good exposure your interests and make yourself competitive. If you have no idea what specialty you want, she will help you create a plan of attack so that you can start narrowing things down.
- Meet with faculty in your potential fields of interest. Vanderbilt has amazing faculty in pretty much every specialty. Moreover, many of these faculty members love speaking with medical students about their specialty. Take advantage of this! Here is a list of faculty members that have a track record of guiding medical students interested in their respective specialty: [Faculty Advisor List](#). When meeting with faculty, be enthusiastic about their specialty but remember to be honest about your level of interest (this will benefit both you and the faculty member). For example, if you have no idea what specialty you want, don't tell them that you definitely want to go into that specialty. These advisors can help you figure out whether and when it is best to do specialty-specific rotations, research, and/or away rotations. Additionally, they may

become your mentors or recommenders if you decide on their specialty later on down the road.

Schedule yourself for success!

- Deciding on a specialty can be stressful. Fortunately, the Immersion Phase gives you something that students at many other medical schools don't have—time.
- You should take ACEs in multiple fields of interest.
- If you are between just two specialties, you may decide to take the respective ACEs/AIs later in time. However, if you are between multiple specialties, take the ACEs earlier rather than later so that you can start narrowing things down.
- Make sure to speak with faculty advisors and Vandy students who have taken the rotations that you are interested in. This way, you have a better idea of what to expect for each rotation. For example, some rotations can be much more intense and demanding on your time, and you will need to be ready to jump in on day 1 of the rotation.
- Schedule research strategically: If you are undecided on many different specialties, you can generally take one of three options
 - **Option 1:** Choose research that can be applicable across multiple specialties. Basic science research is one possibility, but you can also find projects that would be important regardless of your career path (obesity, diabetes, cardiology, pulmonology, etc). Overall, find a more general field of study can easily be discussed in many specialties.
 - **Option 2:** Consider postponing the research immersion until after you have done ACEs in your specialties of interest. This way, your research can be more focused on the one or two specialties you have an interest in, which can serve as a nice bonus to your future residency application and potentially get you a letter of recommendation from a faculty member in that specialty.
 - **Option 3:** Your research immersion will allow you to spend more time in the department where you are conducting research (going to grand rounds, attending division meetings and lectures, working on a daily basis with others in the field). This can be very helpful in better understanding the intricacies of a particular specialty.

Be true to yourself.

- Choosing a specialty is no easy task. There are pros and cons to every specialty, and you must decide what is best for you.
- Be honest with yourself in terms of what you find interesting, what motivates you, and where you want your career to take you.
- Get as much information as you can: get perspectives from those in the field; consider the lifestyles of those in academic as well as private practice; reflect upon the personalities in the field and the patient population you want to work with.

Still undecided?

- If you are still undecided and feel that you need more time, there are options available (though the earlier you look into these options, the better). Many will take a year or two to pursue other scholarly activities while they reflect on their decision (See [Part III](#) for more details). Perhaps you want more time to conduct in-depth research (consider the Medical Scholars Program at Vanderbilt). Maybe you want to refine your business acumen (consider getting your MBA). In any case, Vandy students have taken many different paths to choosing their specialty, and they have done so successfully. If you are in this situation, you should meet with Dean Fleming to discuss your best course of action.
- If all else fails: [Specialty algorithm 1](#) , [Specialty algorithm 2](#)

Overall strategy for registering

Before registration, make sure all the courses you would like to take are in your cart. This will greatly expedite your registration process and will allow you to be more successful in securing the classes you want. When registration opens on YES, you have to click enroll on each class you would like to enroll in and then press submit. Clicking several classes can take some time, so it may be better to just enroll in one or two at a time in priority of relative class importance and scheduling. Otherwise, your schedule may be very far from ideal.

Do not enroll in the same course in multiple blocks, however, as this will prevent other students from enrolling in them. The other students may need letters of recommendation from these courses for their residency applications or may need these courses to graduate, so please be considerate to them. Also, according to Dean Fleming, “almost all program directors will appreciate seeing an AI by September” of your fourth year.

The Atlas: Part II

Specialty-Specific Advice

(from Careers in Medicine Interest Group Leaders)

The following section provides a brief look at specialty-specific advice, written by each specialty's CiM Interest Group leaders. Remember that it can also be helpful for you to speak directly to individuals in your field of interest.

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[Plastic and Reconstructive Surgery \(PRS\)](#)
[Preventive Medicine](#)
[Psychiatry](#)
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[Diagnostic/Interventional Radiology](#)
[Urology](#)

Anesthesiology

ANESTHESIOLOGY MYTHS

CRNAs are going to devalue anesthesiologists. I'm a really impressive Vandy grad and I'm too good for anesthesia. Anesthesia is just putting people to sleep. Anesthesia research is all about pharmacology. Surgeons will be my superiors. Perioperative medicine is just a fad. There is a perfect resume for matching well in anesthesia.

MENTORS IN THE DEPARTMENT

Dr. Matt McEvoy – Residency Program Director
 Dr. Michael Pilla – Residency Assistant Program Director
 Dr. Amy Robertson – Director of Medical Student Education
 Dr. Liza Weavind – Critical Care Fellowship Director
 Dr. Tracy McGrane – Director of Critical Care ISC

ANESTHESIOLOGY COURSES AND ROTATIONS

General:

- Basic Clinical Anesthesiology
- Perioperative Neurosciences: The Brains of the Operation
- ACE: Perioperative Medicine and Surgical Home
- **ACE: Advanced Clinical Anesthesiology (a must)**
This is the main anesthesiology course that must be taken prior to applying for residency. It includes Main OR, Perioperative, Regional and Cardiothoracic mini-rotations. It's a great opportunity to meet additional anesthesia faculty and to request additional letters.
- ISC: Critical Illness
This is a great course to prepare for your acting internship in the ICU. Use the month to master vent settings!
- Other courses to take:
 - o ACE: Emergency Medicine
 - o ACE: Otolaryngology
 - o AI: Cardiac Critical Care
 - o ACE: Other Surgery Elective

Acting Internships: Most students choose to spend a month in the SICU. The SICU has both surgery and anesthesiology attendings, so it's a good opportunity for letters.

Away Rotations: Not necessary for students from Vanderbilt. Our department has a very good reputation around the country, so a strong letter from our faculty will suffice. Most students from top tier institutions will not do away rotations.

WAYS TO GET INVOLVED

Anesthesia Interest Group: Come to AIG events to begin networking with faculty, residents, and students in the field!

Research Groups/Opportunities at Vanderbilt (who to contact)

- Dr. Ed Sherwood (Vice Chair of Research) – Basic Science
- Dr. Jesse Ehrenfeld and Dr. Jonathan Wanderer – Informatics/QI

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- Dr. Heidi Smith – Clinical Trials/Pediatric Delirium
- Dr. Pratik Pandharipande – Clinical Trials/Delirium
- Dr. Matt McEvoy (Residency Program Director) – Perioperative Medicine/Health IT
- Dr. Josh Billings – Perioperative Clinical Trials/AKI RCTs
- Dr. Amy Robertson – Education
- Dr. Matt Weinger (CRISS Director) – Health IT/Device Development, Center for Research and Innovation in Systems Safety
- Dr. Kelly McQueen – Global Health
- And lots more!!

Other opportunities:

- FAER (Foundation for Anesthesia Education and Research) Medical student summer and year-long fellowships:
The summer fellowship provides medical students with an eight-week research experience within an academic anesthesiology department. During the fellowship, students participate in research and training activities, as well as clinical anesthesia activities. In addition, medical student summer fellows have the opportunity to make a scientific presentation at the American Society of Anesthesiologists annual meeting. FAER's year-long medical student fellowship is for those who would like to spend a year focusing on anesthesiology research and receive additional training, and who have completed their core clinical rotations but have not yet graduated. Through the program, medical student fellows can expect:
 - One year of full-time research in anesthesiology
 - A formal mentor-protégé relationship with an experienced investigator
 - Training in scientific methods and research techniques
 - A \$32,000 stipend, plus additional funding to cover relocation, housing, health insurance, travel to a national meeting and other related expenses
- American Society of Anesthesiologists (ASA) Medical Student Component – Speak with the AIG leaders to be nominated as a delegate. All medical schools are entitled to one delegate and one alternate delegate in the ASA Governing Council.
- ASA Annual Meeting – Medical students are able to submit abstracts for posters and oral presentations (and the department will typically reimburse travel).

APPLYING FOR A CAREER IN ANESTHESIOLOGY

Letters of Recommendation: In general, you need one letter from an anesthesiologist, one from your AI (surgery or anesthesiology) and one other (either research, medicine, etc). Don't send all anesthesiology letters. If you are interested in the critical care medicine tracks, you should consider a medicine letter (not required). Chair letters are not expected. Ask for letters from faculty who know you well or were your attending. Meet with Dr. Pilla and Dr. Robertson when you start thinking about anesthesiology (even early on). They can help connect you with faculty mentors. It's never too early to start networking!!

Research:

Research in Medical School: You do NOT need anesthesia research to be competitive for residency. Anesthesia is such a diverse field, that really any research can be applicable. If you choose to pursue anesthesia research during medical school, there are many different areas available: basic science/wet lab, translational (clinical trials and

device development), health IT & informatics (quality improvement and system design), education (medical education, simulation, innovation), and global health.

Research in residency: Typically, there is about 6 months of time during residency that is flexible and can be split up between clinical and research interests. Residency programs love research and you do NOT have to be in a research track to get involved. What is a research track? 0-2 years of additional “research” commitment (*MOST COUNT CLINICAL FELLOWSHIPS*) that include an additional annual stipend (\$5-15K), structured mentorship, up to 6 months of dedicated research time.

Tips from the interview trail

- o You don’t need research, but build a resume that shows connections to our department
- o Know your brand and your customer - anesthesia has something for everyone, so don’t try to misrepresent yourself
- o It’s perfectly fine to change your interests over time
- o Be ready to speak about ANYTHING on your CV/ERAS application
- o Give the Cliff Notes in ERAS, tell your story at the interview

Child Neurology

Courses

- Child Neurology elective!!
- There are many pediatric courses that are useful:
 - Pediatric Radiology: This is a really useful elective that will expose you to all imaging modalities (you'll rotate between ultrasound, plain films, CT, and MR [and get to shadow interventional radiology]) and help you interpret peds radiology studies (as we know, very different from adults!). The radiologists are eager to teach, and the hours are super-chill (you come in the mornings and have the afternoons off)! You'll spend a good deal of time working with the radiologists to read chest x-rays from the NICU and PICU, so you'll become familiar with the appearance of lines and tubes on imaging, as well as the major concerning imaging findings that need to be ruled out (pleural effusions, pneumothorax, pulmonary edema). Plus, you can do more or less of certain imaging modalities, depending on your preferences. You can also request to do lots of neuroimaging!!
 - Child Abuse: This elective comes highly recommended as well, for both its importance and the varied teaching opportunities it offers. Child abuse unfortunately happens more than we would like to believe, so it is critical that we as future pediatricians know the signs to look out for. There may not be that many consults (so it can be a little slow at times), but the attendings are really willing to teach (for ex: lectures about fracture types, mechanisms of injury, abusive head trauma). Also, you'll have the opportunity to go watch depositions, criminal court, shadow a DCS investigator, watch a Forensic interview, and shadow at Our Kids (an offsite group that performs exams on children who have been abused sexually).
- When to take the Acting Internship in Curriculum 2.0:
 - You cannot take peds neuro as your AI. You must take general peds, peds ED, peds hem/onc, PICU or NICU.
 - Ideally you should take your AI before August of 4th year. June/July are both great months to take your AI. A few things to consider -- July is when all the new interns start. This can be good or bad. It's good if you can help out the new interns, teach them starpanel tricks, help them not get lost, etc. But a lot of the focus will be on the interns. June is the final month of intern year. They are usually comfortable with their own skills by this point and ready to teach and give medical students more responsibility.

Research

- There are two strategies to scheduling your research months.
 - First strategy: schedule your research to try to have a project and paper submitted before September of your 4th year. AKA when ERAS is due. This looks great on an application!

- o Second strategy: schedule your research months during interview season (Nov/Dec). This will allow you to travel a lot for interviews without worrying about missing a lot of requirements.
- Types of research
 - o You can do anything -- basic, translational, clinical, QI. Research for peds neuro is less important than it is for other specialties. Although, as it gets more competitive, I'm sure this will become more important. Plus it never hurts to have a first author manuscript under your belt!

Away Rotations

- Definitely not necessary. Remember they can actually hurt you if you don't perform well. However, if there is a specific program that you are really interested in, you should go and WOW them! It may help you get your foot in the door for that dream program.
- When to schedule: After your AI if possible! You really want to impress the program you are doing an away at and having completed your AI will help with this. You also want to schedule it before ERAS is due if you want to get a letter from that program. July/Aug is ideal.

Applying

- Meet with Dr. Ess early and frequently! He is a GREAT resource for everything peds neuro!!!

Dermatology

Courses

Within the Dermatology Department:

- If you are in the pre-clinical years, try to pursue dermatology in the form of an elective or continuity clinic experience.
- If you are in the clinical years, pursue the dermatology elective/clerkship at the start of your 4th year prior to going on your dermatology aways.

Outside the Dermatology Department:

While the best preparation for dermatology is actual dermatology, there are many diseases and disorders that require overlap or multi-specialty efforts with other specialties. Here are a few that we would recommend to consider taking either in the form of electives or during the clerkship year.

- Rheumatology
- Pathology
- Allergy/Immunology
- Oncology
- Infectious Disease
- Plastic Surgery

Textbooks (on electives/rotations):

- 1.) Principles of Dermatology by Lookingbill & Mark's (preferred)
- 2.) Dermatology Secrets Plus by Fitzpatrick

Research opportunities

Overview:

Research comes in different forms. You can pursue clinical, basic science, or translational research. Ultimately, you should seek to pursue an area of research and setting that interests you while keeping several goals in mind when working with a mentor. These goals may entail a publication, presentation at a national conference, or a letter of recommendation. In general, in terms of yield, clinical research (case reports/series, literature reviews, chart review) can yield a publication much quicker than lab-based research.

Vanderbilt:

- Contact the dermatology department for research opportunities. Dr. Zic, Dr. Boyd, and many others conduct clinical research.
- During rotation, ask for opportunities to write a case report.
- Vanderbilt also has strong melanoma research group in the Department of Oncology.

Outside Vanderbilt:

- Once again during away rotations, ask for opportunities to write a case report.
- There are some institutions (i.e. Wake Forest) that specifically offer an "away rotation" than a traditional clinical rotation. These may be nice to consider if you are seeking a more research

heavy month while still getting the opportunity to rotate in clinic with different attendings at the department.

- For basic science: Northwestern, NYU, Emory, U Penn, Yale, UCSF, Stanford have well respected basic science dermatology research. Apply to away research by contacting a PI you want to work with. Free lab labor is usually not competitive so do not contact multiple PIs.

Fellowship Years:

Often times, with competitive specialties such as dermatology, a common question that is posed is “Do I need to take a year off to do research?” prior to the application cycle. A research year has many pros: CV booster, publications, networking opportunities (especially if the fellowship at an outside institution), letters of recommendation. The major cons are you delay your education by taking a year off or even potentially wasting the year if it was not a fruitful experience to your benefit. Prior to doing so, we recommend talking with your advisor and/or mentor to see if the year would help your overall application.

Deadlines: Many formal fellowships (December/January) and informal fellowships (via email; first come, first serve) have early deadlines so give yourself approximately a year before the start of your research to consider whether this something you want to do.

Funding: Howard Hughes, NIH, Vanderbilt Medical Scholars Research Program, external grants (i.e. American Skin Association), intramural funding

Institutions to consider: In addition to staying at Vanderbilt, some of the major institutions (Northwestern, U Penn, Yale, UCSF, Stanford) all have PIs that usually accommodate research fellows. One important consideration/goal in terms of yield is to look at places (i.e. Mt. Sinai, Utah, Wake Forest) that historically tend to interview or take their own research fellows and where you can be highly productive.

Major National Conferences to consider:

- American Academy of Dermatology
- Society for Investigative Dermatology
- Society for Melanoma Research

Applying

Away Rotations:

- We recommend doing 1-2 aways at places you are strongly considering going
- If you do apply, apply early on VSAS (late March-April) and apply to multiple places. Some programs offer aways on a first-come, first-serve basis. Others may have a more selective screening process.
- The major benefits of doing away rotations are securing an interview, getting a letter of recommendation, research opportunities, and networking.
- Other goals include exploring unique dermatology opportunities (i.e. county hospital, telemedicine, different patient population), visiting a new or old town, seeing family and friends
- Keep in mind the following:

- 1) There are some away rotations that have reputations for interviewing their rotators. These may be more worthwhile and include University of Alabama at Birmingham, Emory, and University of South Florida that guarantee interviews.
- 2) Some schools have a reputation of inviting most of their rotators - UT-Southwestern, UCLA.
- 3) There are places that don't invite most of their rotators for interviews (usually the big-name institutions, like Colorado, UCSF, Harvard, among others)
- 4) Most are 4 weeks, but some have 2 week options (Utah, Cornell, University of Chicago, among others)

Letters of Recommendation:

- You can submit a maximum of four letters to each program when you apply.
- One letter should be from the Vanderbilt Dermatology Department Chair.
- The other three should be a balance of dermatology (attendings from a home or away rotation), research mentors, or from clerkships.
- Ideally, it may work to your advantage to have as many letters from well-known faculty, preferably in dermatology, who know you personally and can write you a strong letter of recommendation.
- As a side note, you will also need a medicine letter (required), usually from your sub-I or the medicine clerkship director when you apply to preliminary programs for the intern year

Advising:

- Dr. Zic is the faculty advisor and is super helpful! Feel free to reach out to him with any questions or interests anytime during the process: john.zic@vanderbilt.edu
- [Interest Group Website](https://medschool.vanderbilt.edu/cim/dermatology) (<https://medschool.vanderbilt.edu/cim/dermatology>)
- A great resource! Each year, applicants upload their experiences (on rotations, interviews, etc...) while applying on to this [Excel spreadsheet](#), that gets updated annually.

Emergency Medicine

Immersion Courses

General advice:

- Take courses that you are genuinely interested in because you will actually learn and retain more knowledge.
- This will be the last time for a while that you will have the ability to take month(s) off to do things like travel and visit friends/family. Take advantage of this. They expect you to show up day one of intern year having forgotten a lot.

Scheduling:

- Allow time to do two away rotations between before September.
- Take EM at Vandy before your away rotations. This will help you shine during your away rotations.
- It is not necessary to do your "Acting Internship" before applications go in.
- Other than that it does not really matter when you take other courses. Just be sure to leave room in your schedule to take time off for interviews and leisure.

Courses (in no particular order):

- Anesthesia*: good airway practice
- Dermatology*: you'll see lots of rashes in the ED
- Critical Care*: ISC and/or SubI (MICU, SICU, TICU)
- Global Health/International Medicine Electives*: People have a lot of fun on it.
- Ophthalmology*
- Pediatric EM*: can take as a Sub-I; not the best Sub-I from a teaching standpoint but many opportunities to help with procedures/see patients on your own
- Trauma*: ISC (and/or Sub-I). if you didn't do trauma during your surgery clerkship, highly recommended to get some experience during immersion. Great teaching. Get ATLS training
- Palliative Care*: get great practice and teaching on how to deliver bad news, discuss code status and advance directives, discuss goals of care, and symptom management in a terminal patient.
- Radiology*: get used to reading your own films.
- Sports medicine*: not an official class as of now, but can design a blue sheet elective
- Ultrasound*: also not a set course as of now, but try to get more experience anyway you can
- Emergency Psych*: you will see a lot of psych patients in the ED and Dr. Wilson is great.
- Anything you are interested in! That's the beauty of EM; you see it all.

Research

- Find a project you are interested in.
- Clinical research is more applicable to EM. That being said if you love basic science, go for it - just figure out how to explain how it translates in a practical way.
- There are always tons of research projects going on in the department. Feel free to contact any of the EM faculty about research opportunities.
- No particular time is best for research.
- If your research project is not too time intensive, you can use your research months to study for Step 2.

Applying

- Allow time to do 2 away rotations before September.
- “Standard Letter of Evaluation” (SLOE): These are the most important letters in Emergency Medicine and they are standardized so that in theory it is easier to compare applicants to one another. You’ll need at least 2 of them to apply for EM residency.
 - You will ask for a Vandy EM SLOE during your EM month at Vandy.
 - Ask for a SLOE from each of your away rotations either from the clerkship director or an attending that you worked with frequently.
- Additional letters: Get a fourth letter from a faculty member that you have worked closely with and/or have a longitudinal relationship with; ex. research mentor. This can be from an EM or non-EM person.
- If you take a year off, make sure you also have a letter from someone who worked closely with you during that year (research, internship, etc..)
- If you are worried that one of your SLOEs may be a little weak, get a 5th letter of recommendation as a backup and then you can decide which you want to submit.
 - Keep in mind you will not be able to see your SLOEs, though!
- Dr. Parekh and Dr. Lei are the primary advisors to medical students considering EM.
- Dr. Pfeffer (Batson college mentor) is also a great resource.
- Dr. Wrenn and Dr. Slovis are great resources and they are happy to look over your list of programs and help you decide how many and which ones to apply to.
- The current “magical number” of interviews to guarantee a midrange applicant will match is 12.

Family Medicine

So... you have what it takes to be a family medicine physician? Congratulations! The Immersion Phase of the curriculum is your time to shine, because this will be your first real opportunity to experience a true family medicine rotation, to hone skills in your particular areas of interest, and to delve into primary care in the community or around the globe.

Recommended Courses:

Almost any course will benefit you, since family medicine physicians need to know about every discipline and patient population. That being said, here are some of our top picks:

Family Medicine Courses:

- Away rotations are NOT required or expected in family medicine, but...

WE STRONGLY RECOMMEND AT LEAST ONE AWAY ROTATION IN FAMILY MEDICINE!*

- There is no family medicine department at Vanderbilt- go see what FM can be!
- Valuable opportunity to do an “audition month” at a program of interest to you (don’t worry-- away rotations in family medicine are not as competitive/stressful as in other specialties!)
- May want to do >1 away rotation to see if a community-based program or university-affiliated program is better for you; learn about opposed vs. unopposed
- Many opportunities: Acting Internship away; IDIS 5150 Primary Care Medicine, Non-VU; or MED 7100 AWAY ACE can be done in a Family Medicine department
- Good source for letters of recommendation!

**Note: All away rotations need prior approval. You must start this process several months in advance to ensure that an affiliation agreement is in place between Vanderbilt and the away institution. Plan ahead if you want to do away rotations and get in touch with registrar early!*

Acting Internship:

- Most students interested in family medicine will do AI in Medicine or Pediatrics
- Vanderbilt AI in Medicine at the VA is a great choice because you will gain lots of exposure to more commonly encountered primary care conditions (e.g. COPD, diabetes, CAD, etc.) and a geriatric population
- AI in Medicine on the Morgan service has been a good experience for many students
- AI can also be done in Family Medicine at another institution (away rotation)
- All of these are great sources for letters of recommendation

Integrated Science Courses:

- **IDIS 5613 ISC: Critical Illness.** In many hospitals, the ICUs are “open admit”- meaning that anyone (including family medicine physicians) can admit and manage their own patients in the ICU. Many family medicine residencies teach residents how to manage ventilators and expect residents to write orders on ICU patients as well as general floor patients. This is a great foundational course to introduce students to basic ICU skills and management.

- **IDIS 5614 ISC: Community Healthcare- Patients, Populations, and Systems of Care.**
- **IDIS 5618 ISC: Global Health.**
- **IDIS 5622 ISC: The Skinny on Obesity- What Every Physician Should Know.**
- **IDIS 5624 ISC: Diabetes Mellitus.**

Advanced Clinical Electives

- **EM 5950 ACE: Emergency Medicine.** Is there a doctor on the plane? Provides a great overview of common emergency situations and how to respond. Great for family medicine docs!
- **MED 5620 ACE: Gastroenterology, VU.**
- **MED 5655 ACE: Geriatric Medicine.**
- **MED 5680 ACE: Infectious Diseases**
- **MED 5700 ACE: Shade Tree Clinical Service Learning**
- **MED 5735 ACE: Palliative Care**
- **MED 5760 ACE: Rheumatology.** Focus is on outpatient Rheumatology.
- **MED 5790 ACE: Clinical Dermatology.** Mix of inpatient and outpatient Derm.
- **MED 7100 AWAY ACE: Medicine.**
- **NEUR 5620 ACE: Stroke**
- **PED 5612 ACE: Adolescent Medicine**
- **PED 5730 ACE: Child Abuse Pediatric Medicine**
- **PED 5760 ACE: Spanish Language Pediatric Clinic.** This is GREAT outpatient exposure to common pediatric conditions, as well as a chance to improve your Spanish and cultural competence. All levels of Spanish welcome.
- **PED 5830 ACE: Pediatric Emergency Medicine**
- Any **PED ACE: GI, Cards, Endocrine, Rheum, etc.** are a mix of inpatient & outpatient.

Electives

- **EM 5325: Bedside Ultrasonography in the Emergency Department.** Family Medicine residents spend a 1-2 months in the ER during the first year, and these skills can come in handy. Some family medicine doctors work in emergency rooms (and many more moonlight); ultrasound is a skill that family medicine doctors can easily master and use, if interested.
- **MED 5314 Introduction to Palliative Care.** Many students have recommended this as an excellent course with great faculty; family medicine physicians often care for patients from birth to death and help to honor patients' wishes in end-of-life care.
- **MED 5312 Clinical Rheumatology.** Primarily outpatient experience with rheumatoid arthritis, lupus, and other inflammatory or degenerative connective tissue diseases. Very pertinent to primary care since joint pain is a commonly encountered complaint.
- **MED 5318 Introduction to Dermatology**
- **MED 5322 HIV Medicine**
- **PED 5310 Adolescent Medicine**
- **PED 5335 Obesity Across the Life Stages: Before Breast Feeding to Bariatrics**

Special Topics:

- **IDIS 5930 AE: Preparation for Internship.** Because July is coming. Ahhh!
- **MED 7200 AE: Global Health.** This is for global health experiences abroad.

Research Advice:

Research is not an absolute requirement for matching in family medicine, but many students have enjoyed exploring their interests through research. Students are often asked about their research projects while on interviews, and can lead to a fellowship or area of expertise down the road. These types of research are particularly pertinent to family medicine:

- Clinical and translational research
- Quality improvement research
- Research in systems of health care delivery
- Global health and community research
- Clinical outcomes of any common primary care condition (e.g. diabetes, COPD, asthma)

The most important thing is to find a mentor who is invested in you and your learning goals. Any type of research will be an asset in family medicine! There are ample opportunities for students to present research at Family Medicine conferences throughout the year:

- AAFP National Conference in Kansas City, MO (typically held last weekend in July)
- TNAFP Annual Assembly in Gatlinburg, TN (typically held in October around Halloween)
- AAFP Family Medicine Experience in Denver, CO (typically held first weekend in October)

Tips for Applying to Residency:****Scheduling Considerations**

- Aim to take Step 2 CK before August since most residency programs like to see these scores before granting interviews
- Register early and aim to take Step 2 CS before November/December
- If you would like a letter of recommendation from a course, be sure to take it before August. You will submit your application mid-September, and it is best to give faculty a few months to complete the letters before this deadline.

Letters of Recommendation

- You will be able to submit four letters of recommendation to any given program. For family medicine, letters may come from any faculty in any department. Since there is no “Chair of Family Medicine” at Vanderbilt, students in the past have requested the “Chair” or “Department” letter through the Vanderbilt Department of Pediatrics; however, a chair letter is generally not required for family medicine residencies (each individual program may vary, but this has been our general finding).

- Faculty members who know you well and who have been supportive of your family medicine career goals will write the best letter for you. Research mentors often write very good letters. Acting Internships and away rotations are other good sources for letters. Faculty in the Medicine and Pediatrics department have also written great letters for family medicine students in the past.

***N.B. The Family Medicine Interest Group (FMIG) has created a “Residency Application Guide” specifically for students applying to residency in family medicine. If you are interested, please e-mail vandyfmig@gmail.com or get in touch with the FMIG leaders to obtain a copy and more personalized advice. Our “Residency Application Guide” will help to walk you through the process from start to finish and provide more detail about away rotations, applications, interviews, and program selection. We can help to connect you to family medicine preceptors for shadowing or away rotations, as well as with recent graduates in our alumni network. We are more than happy to help talk things over with you and answer your questions!*

General Surgery

If you are reading this, you must be considering General Surgery for your career in medicine. Congratulations! It is an excellent field with incredible opportunities.

This document contains considerations and advice regarding how to approach the Curriculum 2.0 Immersion Phase for someone considering General Surgery.

Faculty Advisors

The most important thing you can do during your Immersion Phase if you are considering the field of General Surgery is to communicate your interest with Dr. Kyla Terhune (kyla.terhune@vanderbilt.edu). Dr. Terhune is the General Surgery Program Director at Vanderbilt and loves to help students achieve their goals. Do not wait until you are sure you want to apply in General Surgery to contact Dr. Terhune.

The Immersion Phase is designed as a flexible period in the curriculum where students have the opportunity to personalize their education. As such, there is no single way to approach the Immersion Phase for students considering General Surgery. What follows are some general concepts regarding the Immersion Phase, but your specific situation may require a unique approach not addressed here.

Courses and Clinical Rotations

General surgery is a broad field, and surgeons take pride in being well-rounded doctors. Therefore, almost any clinical rotation could complement your training as a future surgeon. Some experience in critical care is particularly helpful. The Integrated Science Courses in Critical Illness and Injury, Repair, and Rehabilitation are two ISC's that are directly applicable to General Surgery training.

There are numerous opportunities for Advance Clinical Electives and Acting Internships on General Surgery services. Over the 2-year Immersion Phase, students should plan to complete 2 ACE's and 1 AI on surgical services. 1 ACE and 1 AI in surgery would be the absolute minimum. For the ACE's, choose services that you are excited to be on and in fields that may interest you. For your Acting Internship, VA General Surgery and Hepatobiliary/Liver Transplant are two services at Vanderbilt that are particularly well suited to facilitate an Acting Internship; however, there are several other services that would be excellent choices. As surgical ACE's and AI's will be the source of your letters of recommendation it is best to schedule them prior to September of your 4th year, if at all possible.

Every year Dr. Terhune directs a Surgical Internship Preparation course in the winter/spring. In the past, this course has been targeted at 4th year students who have applied in surgical fields. She is working toward re-purposing the course to target 3rd year students in order to prepare them for their Acting Internship. So stay tuned to developments in this course and consider scheduling it in the spring of your 3rd year.

Away Rotations

Unlike some of the surgical sub-specialties, General Surgery is not a field that *requires* “Away” experiences. In the past, some Vanderbilt students have done surgical rotations at outside institutions, while other have completed all of their clinical rotations at Vanderbilt. Whether or not you do an away rotation should be discussed with faculty advisors, as the decision is different for every student.

If you do decide to do an “away rotation,” know that you can help yourself or hurt yourself. You should be well prepared prior to the rotation and committed to fully immersing yourself in the rotation, working harder than the other members of the team.

Research

The required Research Immersion component of the curriculum allows students to spend focused time to learn the process of research and hopefully submit work for presentations and publication, both of which are excellent additions to a strong residency application.

The research process takes time. So in most cases, the earlier you schedule research into your Immersion Phase, the more likely you are to be able to list accepted presentations and publications on your residency application. Additionally, for students who are undecided about what field to apply in, the research phase allows time to explore multiple fields through shadowing experiences and meeting with faculty from various fields. For applicants in General Surgery, your research does not have to be surgery-specific. Pursue a project that interests you and look for mentors who are willing to spend time to help you through the process.

Letters of Recommendation

Most General Surgery residency programs require 4 letters of recommendation. One of these letters must be a “Chairman’s Letter.” The Chairman’s Letter is written by the Chairman of the Department of Surgery, currently Dr. Daniel Beauchamp. You obtain this letter by scheduling a meeting with Dr. Beauchamp. You should plan to schedule this meeting during the August prior to submitting your application in September.

The other 3 letters should be from attending surgeons whom you have worked with on clinical rotations. Ideally these are surgeons at the Associate Professor level or higher. In general you should not plan to submit letters of recommendation from non-surgical faculty, except in special circumstances where the faculty member knows you very well or has spent an exceptional amount of time with you, i.e. a Ph.D. mentor.

USMLE Step 2

Your Step 2 CK score is increasingly more important for your residency application in all fields. Whenever you decide to take it, make sure you provide adequate time to study so as to give the test your best effort (2-4 weeks is typical). There are very few, if any, rotations that are light enough as to allow adequate study for Step 2 during the rotation, so it is best to schedule the test at the end of a “Flex month.”

There are few programs, if any, that require a Step 2 score prior to sending interview invitations, so the score does not have to appear on your ERAS application, which is submitted September 15th. Ideally, you should have an excellent Step 2 CK score by the time you

interview (November – January), so planning to take it by October of 4th year is advised. Advice regarding when to take Step 2 is evolving, so be sure to discuss your plan for Step 2 with faculty advisors.

Finally, Step 2 CS is a pass/fail test that is required for all medical students. You should plan to have this done prior to interviews (November). This test can be a hassle, but don't procrastinate, get it done.

Flex Months

As mentioned before, it is recommended you use a flex month to study for Step 2. The other consideration for flex months would be interviews. Interview season for General Surgery is November through January, and there are some programs that will offer some interview dates at the end of October. Interviews require preparation, focused attention to the process, and travel. It is important to schedule at least one flex month during the interview season. December probably holds the most interview opportunities at a broad range of programs, next would be November. Thus, scheduling a flex month, during one or more of these months is strongly recommended.

Summary

- **General Advice:** Reach out to Dr. Kyla Terhune (kyla.terhune@vanderbilt.edu)
- **Rotations:** 2 ACE's and 1 AI on surgical services prior to September of 4th year
- **Away Rotations:** Not required, discuss with faculty advisors
- **Research:** The earlier the better, does not have to be in a surgical field
- **Letters of Recommendation:** 4 total: 1 Chairman's, 3 from Attending Surgeons
- **STEP 2:** Use a flex month, October of 4th year at the latest
- **Flex Months:** helpful for Step 2 and Interviews

Internal Medicine

Courses that we have found helpful in the Immersion Phase:

- *Dermatology*: After having both my medicine clerkship and Morgan sub-I, I found that I was encountering many patients who had derm concerns/questions that I just did not feel comfortable answering. This clerkship was the perfect thing for gaining confidence in this area of medicine. The clerkship itself is well-organized, with several different experiences (100 Oaks clinic, VUH consults, VA clinic [with tons of procedures!], Mohs surgery, etc.). I went into the month with some specific goals, which I was able to meet: being able to distinguish a benign skin condition from one that should have a biopsy, being able to talk to patients about derm health, and gain experience treating common things (like nail fungus and acne). Overall, highly recommended!
- *Primary Care*: If you can, I highly recommend doing this rotation at a site other than Vandy. I was able to do mine at a family practice clinic in the Northeast that was firmly established in the community, and it was an incredible experience of what small-community primary care could look like (yes, they still used paper charts, the attending had admitting privileges at the local hospital, and we made house calls). Go out and get an experience different from the one you've been having for the last two years!
- *Emergency Medicine*: I understand that EM *might* not be required in the new Curriculum 2.0. I think this is a shame, because it is hands-down one of the best "clerkships" offered at Vandy (yes, there is still a shelf exam, but it's totally worth it). Drs. Slovis and Wren have a clear goal for making it a great learning experience, and I *finally* felt comfortable reading EKG's! I took this block right before I took a block off to study for Step 2 CK, and I know that it contributed to my significantly increased score over Step 1.
- *Gastroenterology*: I think participating in any specialty service gives you a helpful and unique perspective on what your real-life career could be later on that you may not have gotten on the internal medicine clerkship. I was able to tailor my month to spend some time with the inpatient Rogers service, a week on consults, and a week of outpatient time in the IBD clinic. By immersing yourself in something highly specialized for a month, you become a champ at knowing what that service looks for when you return to general medicine.

Things to consider when registering for classes:

- One thing that I did not plan out in my schedule was fitting in the Critical Care ISC with enough time left in my schedule to do a MICU AI before graduation. I regretted not having that true ICU experience (I did a Morgan Sub-I, which was also a great experience, but I just wished I had had time to do both), and wished I would have taken the ISC earlier to give myself some flexibility. In summary, if there are classes that are prerequisites for *anything you might be interested in* taking, try to get them early on in your immersion phase!

- When to take the acting internship in curriculum 2.0: I did my AI in May, which I thought was a great experience. I contrasted it with my medicine clerkship experience, which I did in July. July proved to be organized chaos in a way: the interns had *just* arrived and there was not a lot of time on the wards for organized teaching because the residents were just trying to make sure that all the patients were safe and all the documentation was getting done. Doing an AI in May, on the other hand, allowed me to learn from really excellent interns who had time to teach and it let the resident spend time showing me how to embrace the intern-level position. I really felt like I was able to be the “July intern” because my real intern already knew how to do everything.

All about research...

- **When should I schedule research time?**
 - Out of necessity, I scheduled my research months for September, October and November of my 4th year. One thing that was really great about this (for the hybrid class) was that I continued clinical electives all through the spring/summer following the core clerkships, got Step 2 CK and CS out of the way while clerkship information was still fresh in my mind, and got my Sub-I in before the new interns started. Those were all great advantages in my book. The downside to delaying research until the fall of residency applications was that I had much less time to focus on research than I thought I would in the midst of applying. In fact, I ended up having to cancel my November month (using a flex month instead) and then moving that research block to January. If you think you are going to need to schedule more than a handful of interviews (which most people will tell you is necessary), then I would recommend not banking on being able to do interviews during a research month.
- **What type of research might be most helpful (basic science vs clinical, etc)?**
 - I’ve heard more and more that basic research is a huge plus for residencies and competitive fellowships. I would absolutely recommend taking a year off for research if you have no constraints to prevent you otherwise! I spent a year at the NIH doing basic research and felt that I would not have been able to have such a positive experience if I had been trying to juggle research with clinical responsibilities. It really changes how you understand the medications you’re prescribing patients and the meaning of a “race for a cure!” The research I did gets brought up at every interview, and several program directors have commented on how much basic science experience is coveted. That said, I also think research of any kind, including clinical research, is valuable and necessary to be considered by academic programs, so start finding mentors at Vanderbilt early. I found a great clinical research mentor my first year with whom I collaborated the rest of my time at medical school.

Applying for residency in Internal Medicine:

- **If and when to schedule away rotations:**
 - I asked a lot of folks about doing an away rotation in IM, and on the whole, I seemed to get more negative responses than positive ones. In general, the thought was that so few people do away rotations unless they have a specific

school/city they are trying to get to that doing an away rotation has the potential to be more harmful than helpful. “It is like being on a month-long interview... you have to show your absolute best side for a whole month.” However, in the end, I made the decision to go ahead and check out one of my top schools on an specialty consult service. I cannot say enough *good* things about this experience. Doing an away rotation was an incredible opportunity to see how another institution does things differently (different does not mean worse or *wrong*), to get the perspectives of new attendings, to see a different patient population, to see if you get along with the residents of a potential program, and to check out a city you might want to live in for the next 3+ years!

- I also concur that an away rotation can be the most rewarding experience of 4th year! I did an inpatient elective at my top choice program in October and found the timing to be perfect—it gave me a chance to meet the program director just as interview decisions were being made and I also had already done my sub-I at Vandy so I felt well-prepared to handle the clinical responsibilities. There’s a learning curve with any new system, but I loved experiencing a fresh perspective and getting a true sense of what residency at that program would be like. Despite the general advice that internal medicine applicants don’t do aways, if you have a strong reason (eg. the program is your first choice or you have family/a significant other in the city), it’s absolutely worth it!
- **When and how to ask for letters of recommendation within the department:**
 - When approaching a potential letter-writer, one phrase a young attending told me to use was “I was wondering *if you feel that you have gotten to know me well enough to write me a strong letter* for my residency application.” This phrase lets the person know that you expect a *strong* letter from them, and also gives them a way to say no without feeling rude (e.g. they could easily say, “I don’t feel like I have spent enough time with you to write you the strongest letter, and I know that you could do well....” Or something similar).
 - Sometimes if you’re only going to spend a week or two with an attending you need a letter from (such as on your sub-I), it’s helpful to let the attending know as soon as you start the service that you hope to get a strong letter. I found that attendings paid more attention to you if they knew they were going to have to recall anecdotes of specific things you did for a letter afterwards.
- **Who are good faculty members in the department to talk to about applying?**
 - Dr. Yakes is great because she has a lot of experience in counseling students, but it not directly involved in the selection process for Vandy students. She was also fantastic during the mock interview process!
 - Drs. McPherson and Sergent are wonderful and are more than willing to come to bat for you when you start thinking about the particulars of applying (what programs are similar/different from Vandy, where Vandy grads have gone and enjoyed their residency experience, etc.)

- **What about writing my personal statement?** Our IM faculty had this to say:
 - We want to know where the applicant wants to go after training in future. Personal statement is used as a tool to have a better interview experience. Top tier academic programs look for curiosity and academic potential.
 - Don't sweat it too much.
 - Half a page is too short, a page and a quarter is too long. If you can't fit it on a page, you haven't edited it enough.
 - Tell something about who you are and it's all right to put humor in there. Vivid anecdotes about meaningful patient stories are good as well. I like a meaningful "hook."
 - Bragging rubs people the wrong way (they have the CV to look at).
 - Grammatically incorrect CVs are a pet peeve. Don't use dangling participle. We are looking for detailed oriented people.

More general advice...

- Even if you think you made the *perfect* schedule at the beginning of the year, know that it will probably change... and that is okay
- This is your education – try and discern where your weaknesses are and what you want to have learned before you graduate from medical school and make time to learn those things. You'll be in residency for another 3 years at least, so try to embrace those experiences that you will only be able to have as a medical student (e.g. take an elective on the ethics consult service, get in that weird ACE course that exposes you to something you will have little time to focus on in residency like Sports Med, etc.)
- In medical school, you often have to make sacrifices (big and small) in order to fulfill all your responsibilities—as a student, a researcher, a healthcare provider, and partner or family member. Sometimes being the best provider to your patients means you miss an opportunity for extra research, or needing time to study means you miss a fun event with friends. Try to find the best balance that works for *you*, regardless of how others balance their time. Do what you need to do in order to stay sane—and ask yourself, in 1 month or even 1 year, is this a sacrifice I'm going to feel was worth it? Then make your decisions accordingly.

Med-Peds

Combined Internal Medicine-Pediatrics doctors spend a 4-year residency becoming fully trained in both specialties. After residency, they are double-boarded in Internal Medicine and Pediatrics. They have a world of possibilities open to them, with the ability to practice ambulatory primary care for all ages, sub-specialize by completing a single or combined fellowship, participate in global health, or become a hospitalist. They are also able to care for patients with childhood-onset illnesses that survive into adulthood, patients with adult conditions that now present in childhood, and patients with diseases who require special care as they transition from childhood to adulthood care.

A little over half of Med-Peds residents go into primary care, 18-25% subspecialize, and about 15% become hospitalists. They are well suited for treating adolescents and young adults, or for caring for adults and children with chronic conditions like congenital heart disease, cystic fibrosis, sickle cell disease, cancer, or diabetes. Contrary to popular belief, it is not true that most med-peds physicians end up practicing in just Medicine or just Pediatrics. Dr. Sandi Moutsios has been known to say that she would feel like “an arm has been cut off” if she had to give up medicine or pediatrics!

Planning The Immersion Phase

Luckily, you have a huge amount of flexibility in your immersion phase if you are considering med-peds. There are no hard rules, but some advice is below.

Courses:

- You only need to do a sub-internship in medicine or in pediatrics. That said, since you have two years for the immersion phase, it may be a good idea to do both. There are a couple of programs that want to see two, such as Brigham and Women's/Boston Children's. Check program websites if you're curious, but if you really only want to do one sub-I, it should not be much of a limitation.
- Get some kind of ICU experience, be that the Critical Care ISC or a NICU, PICU, CCU, or MICU block. A good portion of a med-peds residency is in the ICUs, so it will be nice to be prepared!
 - o The Critical Care ISC is a fantastic course where you spend 3 weeks in the classroom doing CBLs, simulations, procedure practices, lectures, and journal clubs, and then one week in an ICU. You'll also get FCCS certified, though we're not sure if residencies actually care.
- The rest of your blocks are for your own benefit. We haven't heard of programs basing their interest in you on which courses you have taken. You'll probably want to do this anyway, but get a good mix of medicine and pediatrics rotations. Then, throw in some rotations that you'll never see in residency.
 - o Ideas for building residency skills are radiology (ISC or otherwise), intern boot camp, or even pathology
 - o Ideas if you're interested in primary care are dermatology, clinical ophthalmology, community medicine ISC, obesity ISC, and something in sports medicine or PM&R.

- o The bread and butter of Med-Peds residency is time spent on inpatient services, both general and subspecialty. If you talk to Dr. Moutsios, she will suggest that, particularly in your fourth year as you are preparing for residency, you spend as much time as you can on “major organ” rotations (cardiology, pulmonology, heme/onc, ID, etc.) or general inpatient rotations. It doesn’t matter whether you do these on the adult or peds side – just that you get as much familiarity as you can with these specialties that will be a large part of your residency experience.
- Any course advice in the [Internal Medicine](#) or [Pediatrics](#) “Atlas” pages apply to you too!

Away rotations:

- Not necessary for Med-Peds, but if there is a program or city that you would really like to check out, go for it! Many programs do not have a specific Med-Peds elective, so just apply for electives on both sides, it doesn’t matter which. Wherever you go, be sure to contact the Med-Peds program director, ask for a brief meeting, and also ask if you can go to the Med-Peds weekly or monthly conferences. Some programs may be willing to let you do your primary care block in their Med-Peds clinic, so contact them very far in advance (>6 months) to ask if you are interested.

Research:

- Timing is up to you, but aim for earlier in your immersion phase. Projects never end as early as you expect, and there may be loose ends to tie up after your research blocks are over. If you are trying to publish or present your work, you’ll want to complete it on the earlier side so that there is time to submit to journals or conferences.
- Your research can be in Medicine or Pediatrics, or really anything that interests you! Med-Peds people are generalists at heart and will probably be interested in whatever did as long as you can talk about it with some enthusiasm at your interviews.
- Research is about quality, not quantity. You can list all of your experiences on ERAS, but in interviews you might have time to talk about one or two research experiences at most. Sometimes they don’t even ask about research if something else you did is more interesting.

Applying:

Letters of Recommendation

- 2 from Chairs:
 - o One letter will be from Dr. V, the Medicine clerkship director, who writes on behalf of Dr. Brown, the Medicine department chair. Around May or June of your 3rd year make sure you’re on Dr. V’s list of students interested in Medicine. The Medicine IG leader can help you figure out when he’s collecting names.
 - o One letter will be from Dr. Weber, the Pediatrics department chair. Dr. Jordan, the clerkship director, helps write it, and you should meet with her also sometime during the summer. She’s very interested in helping in any way you need!
- 2 on your own:
 - o One letter from a Medicine attending who knows you in a clinical setting
 - o One letter from a Pediatrics attending who knows you in a clinical setting

- o This may mean that you don't have a letter from a research mentor, and that is completely fine! Dr. Moutsios says it is more important that they know you are strong clinically so that they can trust you will be ready to go as an intern.
 - o If you took a year off for research, an MPH, etc., you should have one letter from someone with whom you worked closely during your year-off. This will substitute from one of your two clinical letters.
- If you are applying in another specialty, you may submit specialty-specific (even program-specific) letters on ERAS. You can actually do this for your personal statement too. Ask letter writers to write you two copies of their letter where they exchange the specialty name when they are writing "I recommend this amazing student for X specialty"
- Try to give writers a month's notice, but don't worry if you can't do your sub-I until August. It's okay if you are missing a letter when September 15th comes around; your writer can upload it even after you've submitted ERAS.

Where to go for advice:

- Dr. Moutsios (Program Director at Vanderbilt) and Dr. Green (Assistant Program Director) will be your go-to's, but any of the Med-Peds faculty and residents will be happy to talk to you. Residents are great to talk to when deciding on your program list because they are not too far from the interview trail themselves!

How many programs?

- There are no set rules, and this will depend in part on your grades, step scores, and other experiences in med school. Dr. Moutsios can provide individualized advice about how many programs to apply to. If you are a super strong candidate, you may only need to apply to 10-15 programs. If you have some weaknesses, it would likely be wise to apply to 15-20 programs.
- When deciding how many programs to interview at, talk to Dr. Moutsios, but a ballpark is to complete 8-12 interviews. That said, students who apply to 6 Med-Peds programs have a 97% chance of matching, and 5 programs gives you a 94% chance of matching!

What should I consider when choosing between programs?

- Top priorities should always be: do you see yourself enjoying working here, do you like the residents, and do you like the location? You'll get strong clinical training in most places, so the details below are only secondary to personal priorities.
- Is the continuity clinic a separate Med-Peds clinic, or do you divide your time in Medicine and Pediatrics primary care clinics?
- Is the clinic on-site (more convenient) or in the community (get to feel more immersed in your patients' lives)?
- Is the pediatrics hospital stand-alone? There is debate about how important this really is, but you may develop a preference.
- Do residents like the EMR system? A large portion of your time will be spent on it!
- How many elective blocks will you have?
- If you're interested in a fellowship, ask residents about it. Have any recent residents gone into that field?

- Do residents feel like they “belong” among both med and peds residents? Does the Med-Peds department have a strong presence?
- Do you jive with the Program Director, Assistant Program Director, and their philosophy for the program?

Neurology

Classes within the department that are good to take:

Highly recommended:

- **Advanced Clinical Elective (ACE) in Stroke:** this is a 4-week rotation on the inpatient neurology stroke service that is based in the neuro-ICU setting. While this is labeled as an ACE, **this elective is the only neurology elective that also counts for sub-internship credit.**
 - o *When to take this class?* There is a lot of flexibility with curriculum 2.0 and it really depends on your goals. For example, if you are interested in neurology but not 100% sure and want to explore the specialty more, it would be very reasonable to take the stroke or general neurology ACE early on in year 3. However, if you are definitely going into neurology (), the latest you should take the neurology ACE/“sub-I” is by **August of year 4** in order to have your letters of recommendation in time for your residency application (due mid-September).
- **Advanced Clinical Elective (ACE) in General Neurology:** this is a 4-week rotation that can be tailored to individual interests. Rotating with the inpatient consults service provides great exposure to general neurology. There is also the option to rotate with the general neurology inpatient service or work in the outpatient setting in a variety of subspecialty clinics (movement disorders, multiple sclerosis, neuro-oncology, etc.). Note: this ACE does **not** count for sub-internship credit.

Other electives within the neurology department:

- **Neuroradiology ACE** (4 weeks)
 - o **Note:** this class has a prerequisite, Medical Imaging and Anatomy ISC
- **Movement Disorders and Deep Brain Stimulation** (2 weeks)

Classes outside the department that are useful:

- **Acting internship (AI) or ACE (one that counts for sub-internship credit) in medicine:** any of these will be great learning and extremely useful. As many neurology programs require a preliminary medicine year, this rotation will greatly prepare you for that intern year. In addition, if you are applying to advanced neurology residency programs (in which only PGY2-4 years are provided), you will likely be applying to

independent preliminary year programs in medicine, and it is a good idea to have one letter of recommendation from a medicine rotation for those programs.

- o *Examples:* Medicine VU (AI), Critical Care VAH (AI), Critical Care VU (ACE), Cardiac Critical Care (AI), Medical Oncology (ACE), Hematology-Oncology (ACE).
- **ICU rotation:** either the Critical Illness ISC, Critical Care VU ACE, or Critical Care VAH (AI).
- **Principles of Physical Medicine and Rehabilitation** (2 weeks)
- **Brain Tumors: A Surgical Perspective** (2 weeks): a great neurosurgery-based elective with the opportunity to spend time in the outpatient neuro-oncology setting.
- **Any medicine elective** will provide great learning and have overlap with neurology. Examples include infectious disease, rheumatology, cardiology, etc.

Research in neurology:

Neurology is a very academic field, with many exciting developments having occurred in the field recently. Moreover, many residency programs (but not all by any means) like to see that applicants have pursued at least one research project in medical school. While a fair amount of neurology research is in basic science, a large amount of research is also being performed in the translational and clinical sciences. Regardless of the type of research, when it comes to performing any kind of research, selecting a good mentor is probably the most important step. The right mentor will be invested in your success, and will make sure that you have the resources you need all along the way. For students new to research, it may be best to avoid particularly busy principal investigators who may not have enough time to provide sufficient instruction to allow your time to be productive and enjoyable. Of course, you must also find a topic that you find interesting, and not one that you think will simply impress residency program directors.

You can see the kind of projects being run by faculty members at Vanderbilt by going to the following website: <http://www.mc.vanderbilt.edu/root/vumc.php?site=neurology&doc=26101>.

After encountering potential research mentors whose research backgrounds appear interesting, you should try to arrange a meeting with them. Of note, there are several faculty members who are more enthusiastic about working with students than others; one of the best ways to determine these potential mentors is to contact the neurology program director (Heather Koons) or to speak with a neurology clinical instructor. Another note: unless you have sufficient background performing basic science research and are familiar with the techniques required in your prospective research lab, it may be best to avoid a basic science project if your research time is limited (i.e. three months or less).

Applying to neurology programs:

Unlike other specialties, it is not essential that you do away rotations in neurology. Those that do them are usually very interested in attending that institution for residency and use it as a chance to get better acquainted with that specific program. With regards to letters of recommendation, it is best to begin asking potential letter writers June or July of your fourth year – the general rule is that you should give them at least three months advanced notice. Potential letter writers include faculty with whom you worked closely during your clerkship

rotation, on your sub-I('s), or in the clinic; a research mentor if you performed a considerable amount of time performing research (i.e. greater than six months); and the neurology department chair (Robert Macdonald; he is very open to meeting with students and happy to write a letter on their behalf). We recommend that you also meet with the neurology residency director, Heather Koons, to obtain a better understanding of neurology programs throughout the country as well as to address other questions that you might have (she is very approachable).

Neurosurgery

Classes to Take

- The only course offered by the Department of Neurosurgery is the Neurosurgery ACE. This is the traditional “Sub-Internship” that surgical specialties require of their students.
- Outside of the Neurosurgery department, courses we recommend taking include:
 - ACE:
 - Neuroradiology
 - Physical Medicine and Rehabilitation (PM&R)
 - Neurology
 - Palliative Care
 - ISC:
 - Critical Care
 - Rehabilitation
 - Anatomy and Imaging
 - We also recommend completing the Emergency Medicine ACE due to how much you’ll be interacting with EDs as a Neurosurgery resident.

Things to consider when scheduling:

- You will want to schedule your research time on the front end. The reason for this is research takes a while to complete from start to finish. This will give you time to hop on projects that residents/faculty are involved with while allowing you to start your own research project. You want to have a few publications and submissions by the time you submit ERAS. If you plan on doing six months of research, consider doing three months up front and then the rest around your interview time. This can be a great way to travel and have time off without using “flex” months.
- Your curriculum allows you the flexibility to complete your home Neurosurgery rotation much earlier. We recommend you rotate at “home” either April or May, giving you enough time to complete your away rotations well before the applications go in. Watching your email for interview invitations in September and October, while on an away rotation, is very stressful and this allows you to minimize stress.
- After deciding which courses you would like to take to fulfill your graduation requirements, you can place them around your home rotation and away rotations as you please. We recommend putting surgical things up front to give yourself more exposure in the operating room to practice your operative skills.
- Neurosurgery interview offers begin going out the week ERAS is due, but do not really start coming in until the first week of October. They will continue to come in throughout the month, slowing down near the end of October.
- Neurosurgery interviews begin in mid-October and can go until early February, with the bulk occurring in Nov/Dec/Jan. You need to keep these months free to interview. You should also take an elective with flexibility in February so that you have the freedom to travel to 2-3 institutions for Second Looks. This is important not only for yourself to see the institution, but for the institutions to know that you’re interested in them (definitely

not necessary though since most institutions will tell you that they make their rank list after interviews and in no way require second looks).

Research

- Research is an important component to your Neurosurgery application. Every program will ask you about your publications and other research you're involved in. That being said, don't feel the pressure to have >10 publications in order to apply. One publication and a few submitted is more than enough to talk about.
- As mentioned earlier, take your research months earlier rather than later so that you can complete as much as possible prior to ERAS submission.
- Clinical vs. Basic Science Research
 - It is very difficult to complete meaningful Basic Science research in 3-6 months. If you are serious about Basic Science, consider taking a year off to complete a HHMI fellowship.
 - The majority of applicants will spend their time completing Clinical Research, which is typically Outcomes related. This is much easier to complete and push out compared to Basic Science and will give you opportunities to present at conferences and publish.
- Research Opportunities:
 - SOCKS – Surgical Outcomes Center for Kids
 - This group is run by Dr. Jay Wellons, the Program Director and Chief of Pediatric Neurosurgery, and Dr. Chevis Shannon. It is a great group to get plugged into when starting research. It's a well-run machine that will help you lead a project from start to finish as well as get you plugged into ongoing projects.
 - Contact Scott Zuckerman
 - Scott is a graduate of VUSM and is very active in research. Email him and ask what research he currently has going and what the other residents are up to. He's very friendly and loves helping out medical students.
 - Dr. Lola Chambless
 - Dr. Chambless runs a pituitary focused research group but also does a variety of different tumor related projects. She is a graduate of VUSM and did her residency at Vanderbilt. She is the assistant PD and a fantastic mentor for medical students

Applying for Residency

- Away Rotations
 - These are absolutely required within Neurosurgery.
 - VSAS opens in February and you should aim to have your application ready to submit as soon as it opens. Spots at the most popular programs fill up quickly and it serves you well to submit it as soon as possible, as many of them operate on a rolling admissions basis.

- We recommend you do at least two away rotations. This is typically accepted as the norm. Some applicants will only do one and others will do three to four away rotations.
- Scheduling:
 - We recommend completing your away rotations in June/August. This allows you to space out your rotations to avoid burnout and gives you a chance to see programs when they're typically not as busy (most other students are doing their rotations in Aug/Sept/Oct). Additionally, it allows you complete your rotations sooner to have your letters in on time and leaves you free to stare at your computer while waiting for invites to come in.
 - June is a great time to rotate because the residents have spent the past year getting settled into their roles. They will be much more likely to take the time to teach you how to do things on the floor and in the operating room.
 - July is typically seen as a bad time to rotate elsewhere, because it's chaos with new interns onboard. You won't get to do much as a rotator for this reason since they are going to be teaching their interns how to place EVDs/LDs and the juniors are just learning how to operate.
 - While doing rotations back-to-back is feasible, it is not advised. Working two months straight on Neurosurgery as a medical student is very tiring and you want to present the best version of yourself at each institution.

Things to consider:

- Overall, we recommend you choose a diverse set of programs to apply to. Rotate in different geographic regions at different kinds of programs.
- Geographic location: Do you want to go back home? East Coast? West Coast? Midwest? South? When applying for residency, many programs look to see where your letters of recommendation come from so they know where you rotated. If you have no ties to NYC and have a strong desire to end up there, we strongly recommend you complete a rotation at a NYC program. Same goes for the West Coast. The Midwest and South will usually interview us just because we're from Vanderbilt.
- Type of Program: Do you want to go to a very academic program or a very clinical program? Every program leans one way or another, with some programs emphasizing basic science very heavily and others emphasizing the quality of their surgical training. Every program has a different philosophy and it is up to you to ask around about reputations and figure out what you're interested in.
- "Big Name" Programs: Places like Columbia, UCSF, Johns Hopkins, MGH etc. all favor those from their home institution or rotating students. If you've wanted to be a Johns Hopkins trained neurosurgeon for a long time, we strongly recommend you rotate there to maximize your chances of matching there.
- Letters of Recommendation: This changes from year to year, but it's always helpful to find out which programs write strong letters for their rotators. Choosing a program because the chairman/program director have big names does not mean you will get a

strong letter of recommendation. Sometimes, going to a smaller program where they can get to know you well results in a stronger letter.

- In general, you will have the best chance of matching at a school you rotated at (similar to your home institution). Try to pick schools you think you will be interested in matching at.

Letters of Recommendation:

- Minimum requirement is 3. Recommended is 4.
- You will automatically receive a Chairman's letter from Vanderbilt.
- Your second letter should come from a Vanderbilt Neurosurgeon that knows you from your rotation or that you've done research with.
- Your third and fourth letters will come from your away rotations.
- Ask the program coordinators at the start of your rotations how you should go about asking the Chairman for a letter. Most programs automatically assume you will ask for a letter and schedule exit meetings with the Chairman. Completing your rotations earlier means you'll have all of your letters uploaded to ERAS before the submission date.

Faculty to talk to at Vanderbilt:

- Chairman: Dr. Reid Thompson – Very enthusiastic individual that loves talking to prospective neurosurgeons. You will meet with him at the end of your home rotation or at a later time and ask him for a letter.
- Program Director: Dr. Jay Wellons – Phenomenal mentor at Vanderbilt that the residents all speak very highly of. He's very approachable and can provide excellent career advice.
- Assistant Program Director: Dr. Lola Chambless – She is a VUSM graduate and trained at Vanderbilt. She has been involved with medical student education for a long time and is the first point of contact for medical students. You should meet with her as soon as you decide you want to do Neurosurgery and get plugged into the department.

Obstetrics-Gynecology

Courses and Course Planning

During your second year, FCC, you take a two week elective after your Pediatric rotation and Ob/Gyn rotation. No Ob/Gyn electives are offered but you can do an Adolescent Medicine elective in the Department of Pediatrics where you will get exposure to patient counseling regarding contraception, STDs, and overall sexual maturation and health. You can also do a CiM elective where they find different attendings for you to follow in the field of your choice. For the Immersion phase, if you speak with Kat Ewing, the nurse that works with Dr. Jessica Young on the Ryan Program, you can arrange to have a shadowing opportunity at the family planning clinic at Vanderbilt where there are lots of IUD insertions or at Planned Parenthood and The Women's center where elective terminations are performed. You can also work with them to create a 4 week elective in Family Planning where you will spend your time at all three locations with a resident who is on their family planning elective.

As far as classes outside the department go, there is a radiology elective focusing on ultrasound, specifically Crystal Terrace which is all women's health imaging. Also, there is a critical care course – it can be MICU or SICU but this will be helpful for your intern year. There are always a few very sick patients in either of these units on the Ob/Gyn services. The Emergency Medicine course is good overall. Lastly, the Community Health Immersion is one to keep in mind. If you speak Spanish, you can work with the Ob/Gyn physician who works for Neighborhood Health in a safety net clinic. It will also count as your primary care. Things to consider when registering for classes: for FCC, it is helpful to complete your surgery rotation before your Ob/Gyn rotation to get used to being in the OR and learn how to retract, suture, scrub in, and stay sterile.

As far as when to take the acting internship in curriculum 2.0, we suggest anytime between January and June of your 3rd year, preferably after an ACE in Ob/Gyn. However, in Ob/Gyn you cannot do an ACE and an AI in the same topic. The ACEs offered are: Clinical OB, MFM, Uro Gyn, Gyn Onc, Benign Gyn, and Family Planning. The AIs offered are MFM and Benign Gyn. This means that if you want to do an AI in MFM, do not do the MFM ACE. You cannot do the same ACE as your AI.

Research

The potential for more publications is a pro for clinical research in comparison to basic science that can take longer, however, basic science research can be very rewarding and look impressive. There are two basic science labs in the Dept of Ob/Gyn: Osteen/Bruner-Tran Lab and the Khabele Lab. The Osteen/Bruner-Tran Lab focuses on endometriosis, peritoneal inflammation, and pre-term birth. The Khabele Lab focuses on gynecological oncology. The lab websites are listed below. We would suggest only doing basic science if you have a full year to commit.

- o Khabele Lab: <https://medschool.vanderbilt.edu/obgyn/person/dineo-khabele-md>
- o Osteen/Bruner-Tran Labs: <https://medschool.vanderbilt.edu/obgyn/wrhr>

Applying

For away rotations, pay attention to deadlines. Many schools start accepting and have deadlines for away rotation applications in early spring.

Regarding both away rotations and the match process, speak with Dr. New early on in March/April. She will help you through the whole process of applying. She can help advise you on aways (you do not necessarily have to do one), your application (weak areas), your residency program list etc. Start working on your personal statement in April/May, and update your CV as well. As far as letters go, ask after your AI for a letter from an attending you worked with during that time. Remember to always ask, “do you have time?” and “do you feel like you can write a good quality letter of recommendation?” You will also need a letter from the department chair, Dr. Jones. Set up a meeting with him after your AI. It’s helpful if you have a personal statement and CV ready for him to look over. Follow up with his assistant periodically and as it gets closer to the ERAS deadline so that you will get a letter in time. You need one letter from an OB/GYN and one letter from the department chair. The other letters can come from other departments or your research mentor etc. ERAS will only send out 4 letters to a program you are applying to

Good faculty members in the department to talk to about applying

- Dr. Hutul
- Dr. New
- Dr. Weeks
- Dr. Rush

Ophthalmology

Courses and Rotations

2 week elective

During the clerkship phase, there are two opportunities to explore ophthalmology. The first is as a clerkship elective during the Pediatrics or OB/GYN clerkship blocks. The second is as a two week surgical subspecialty during your Surgery clerkship. The two electives are structured identically, but if you develop a strong interest in the field, you are welcome and encouraged to do the rotation both as a clerkship elective and also during Surgery. During the elective, you will have the opportunity to attend clinic at the VA hospital, VEI, and observe cases in the OR at both locations as well. The rotation is very self-directed, so you will have the opportunity to choose which faculty members and which subspecialties you would like to see, as well as which days you would like to go to the OR or the clinic. You will attend daily didactics at 7am Monday thru Thursday and Grand Rounds every Friday morning.

4 week elective

During the Immersion phase, the department offers a 4 week elective, structured similarly to the 2 week elective but over a longer period of time. You will spend 1 week in each of 4 areas: Retina, VA, Pediatric Ophthalmology, and Other (a combination of Cornea, Neuro-ophthalmology and whatever else you want to explore). You will be given a set of ophthalmic lenses at the beginning of the rotation to practice your slit lamp and indirect BIO exam skills. You will have the opportunity to work with residents at the VA resident clinic and attendings at the various clinics at VEI. You also have the opportunity to travel to Murfreesboro to the Alvin C. York VA. This is a great experience that is highly recommended by previous students. You will get great one-on-one time with residents and faculty, and the clinic here tends to be a bit slower paced than in Nashville, allowing you more time to see patients on your own. You will attend daily didactics at 7am Monday thru Thursday and Grand Rounds every Friday morning.

Shade Tree Ophthalmology Clinic

The Shade Tree Ophthalmology Clinic is an excellent way to learn more about ophthalmology, get to know attendings, and practice your skills in a low stress, slow paced environment. It is held once every 1-2 months on Saturday mornings. Look for emails from the clinic directors for opportunities to volunteer.

Immersion Phase Scheduling

Unfortunately, there is no ophthalmology course that counts toward the AI or sub-I requirement. You are recommended to pursue whatever AI interests you. Ophthalmology

programs generally are not interested in your AI and many of us who are graduating in 2016 chose to move our AI to later in the spring. This may give you an advantage going into your intern year, as the medicine and surgery will be more fresh on your mind. It also can give you more time before applications are sent to complete the ophthalmology rotation and do away rotations if you are interested. Keep in mind that as you apply to ophthalmology residency, you will have a large number of interviews compared to your peers because you must apply for a preliminary or transitional PGY-1 year separate from the ophthalmology application process. Be sure to schedule a rotation during October and January that will allow for a few days to be missed. The best time to use your FLEX months is during November and December, when interview travel will be the heaviest.

It is also possible to create a special studies elective in order to gain more ophthalmology experience, especially if you decide not to do an away rotation. In the past, there has been a Community Ophthalmology course that is heavily oculoplastics based, but is no longer in the course catalog. Dr. Ralph Wesley is the attending for this course, and is more than willing to work with students interested in the field. This course provides a great introduction to private practice ophthalmology, and in addition to plastics allows for days spent working in retina and cornea, as well as unique opportunities to work with an optometrist, optician, and ocularist. Although it takes a lot of work to set up, this month is well worth it and Dr. Wesley is a fantastic mentor and valuable connection.

Research

There are many research opportunities in the department, both basic and clinical science. If you are interested in a basic science project, Dr. David Calkins, the vice-chair for research, is a great contact person and a great mentor in general. Other people doing basic science work: Dr. Anthony Daniels (ocular oncology) and Dr. Milam Brantley (metabolomics in age-related macular degeneration, diabetes, and glaucoma). For clinical research projects, Dr. Sahar Kohanim, Dr. Laura Wayman, Dr. David Morrison, Dr. Sean Donahue, and Dr. Jennifer Lindsey are great contacts. We have all worked with several of these faculty on various research projects and they are excellent mentors who work well with students. Feel free to contact us or them if you have any additional questions about research opportunities.

It is important to consider that publications are important but not necessary for applying to ophthalmology. Spending 6 months on a basic science project is less likely to yield a publication than spending 6 months on a clinical project. That being said, it is important to pursue research you are interested in and be able to talk about why your project is important and why you chose it during interviews. Most faculty are understanding of the fact that basic science publications are hard to come by and if you are working with them on a basic science project, they can often loop you in to write a review paper or book chapter with them. Be sure to ask for those opportunities up front and establish expectations about authorship and responsibilities when considering what project is best for you.

The Application Process

Away Rotations

There is a lot of controversy in ophthalmology about away rotations. They are certainly not required or expected. That being said, it is generally agreed that if you have a strong regional preference or a strong preference for a specific program, doing an away rotation **might** be advantageous. In addition, if you have some weak spots on your application (low step score, lack of research) that might be mitigated by making an appearance, working hard, and getting to know people at a program, an away rotation **might** be a good thing to do. However, the learning curve in ophthalmology is steep and many programs will expect you to take a very hands on approach- working up patients on your own, using your lenses, presenting cases, taking call with the residents, etc. Consider carefully whether the risk is worth the benefit when deciding to do an away rotation and talk with your mentors!

SF Match

The ophthalmology application process occurs through a system independent of ERAS. There is an online application known as CAS, which includes your personal statement and experiences, as well as a paper application. The paper/mail application consists of 6 documents which you must MAIL to the SF Match office for processing. These documents are: 3 letters of recommendation (no more and no fewer), 1 medical school transcript, 1 undergraduate transcript, 1 USMLE score report transcript. Most programs post applications deadlines around the middle of September, however, you must allow for time for your mailed documents to arrive, be scanned, processed, and distributed. Therefore, your goal for submitted SF Match and mailing your documents should be **early August**.

There are many faculty members who are willing to help proofread your personal statement and prepare your application. Dr. Mark Ewald, the medical student education director, is a great resource and will go through your application and personal statement with you anytime. Dr. Janice Law, the associate program director, Dr. Anthony Daniels, and Dr. Sahar Kohanim are also great resources and very willing to meet with students.

Letters of Recommendation

The SF Match system will allow for 3 letters of recommendation. Traditionally, it is recommended that you have 2 letters from ophthalmologists and 1 letter from a core clerkship. However, you should always choose the three letter writers who you feel will write the strongest letter. If you are more comfortable with 3 ophthalmology letters, that is also acceptable. It is generally not acceptable to have only 1 letter from an ophthalmologist.

Because the ophthalmology rotation is fairly hands-off, it is difficult to get a letter of recommendation during that rotation. The best way to get a letter from an ophthalmology

faculty is from a research mentor with whom you have worked closely. If your research mentor also has clinic, it is advisable to spend time with them in the clinical setting so that they can speak to your clinical competence.

Dr. Sternberg, our chairman, is a wonderful resource and an incredible advocate for medical students. If you are interested in ophthalmology, meet with him early to make your face known and get some of his wisdom and advice. Even if you decide not to pursue ophthalmology, he can be a great mentor! He will meet with you again shortly before applications begin and will likely be willing to write a chairman's letter of recommendation for you as well.

Remember that for ERAS, you may want 4 letters of recommendation, so it might be good to ask for a 4th letter and then decide who you will use for SF Match and who you will add on for ERAS.

When asking for letters, you will need them printed on Vanderbilt letterhead and sealed in an envelope with a signature or stamp across the seal (A bit more archaic than ERAS!). You will mail these all together with the other documents listed above to complete your SF Match application.

Additional Resources:

1. An excellent guide to the ophthalmology application process:
<http://webeye.ophth.uiowa.edu/eyeforum/tutorials/iowa-guide-to-the-ophthalmology-match/index.htm>
2. EyeRounds: An excellent website with various tutorials on everything from Refraction to advanced ocular disease <http://www.eyerounds.org/tutorials/index.htm>
3. Cataract Surgery: *almost* everything you'll get pimped on in the OR
<http://www.medrounds.org/cataract-surgery-greenhorns/2005/09/chapter-3-anesthesia.html>
4. The Eyes Have it: <http://www.kellogg.umich.edu/theeyeshaveit/> A great introductory resource for ophthalmology. You will be given this website and asked to complete the quizzes during your ophthalmology electives
5. OphthoBook: <http://www.ophthobook.com/> free, great introductory textbook for medical students.

Orthopaedic Surgery

Courses

Within the department, the obvious choice to take is the **Orthopaedic Surgery ACE**. It is advisable to talk with the other students interested in orthopaedics to make sure there are not too many students taking it in the same block (4-5 is probably the absolute max so that everyone gets enough call days). The best time to take the course is probably January – April of the immersion phase such that it is early enough to fit in 3 away rotations (if you want) but not so early that you forget what you learned before your aways. Look into what faculty you may want to get letters from and talk with the other ortho students to arrange who will be taking which subspecialties during the month (each student gets 2 weeks on 2 different subspecialties).

For courses outside of the department, the **Diagnostic Radiology** elective is a great experience to have before going on away rotations. You can spend the majority of your time in the musculoskeletal reading room with Dr. Jordanov and company, who will teach you the basics of reading musculoskeletal X-rays, CTs, and MRIs. Another class that is not as well publicized was an elective that some a couple ortho students have put together with Dr. Dalley the past couple of years. This course was a **Special Clinical Study (SURG 6100)** directly arranged with Dr. Dalley that taught students a more in-depth study of musculoskeletal anatomy as well as basic orthopaedic approaches and surgical skills used in the field.

Integrated Science Courses (ISCs) that are of particular interest to students going into orthopaedic surgery include **Medical Imaging and Anatomy**, as well as **Injury, Repair, and Rehabilitation**. Try to get early slots for these as well (if possible), while saving your later months for other graduation requirements like primary care and emergency medicine.

In terms of other scheduling conflicts, the majority of orthopaedic interviews occur after mid-November and throughout the whole month of January, so it may be advisable to take flex months during that December/January in order to accommodate these. In addition, there are a few programs who now like to see Step 2 CK scores, so it may be useful (but not absolutely necessary) to schedule some time to study and take this soon after clerkships such that the knowledge is still fresh.

Research

For everything research related, it is better to start earlier than later, as the process itself can take a while and you would like to have a couple abstracts/presentations/papers on your CV before application season. If you have a mentor established already (from 1st or 2nd year), these months can be very productive and you can get a lot submitted such that you can get the ball rolling on the process. It is a good idea to talk to your mentor to see when abstract submission deadlines are for the main conferences that they submit to, and then you can possibly schedule your months around these dates to be of the most help.

As for basic science vs. clinical research, it is easier to get more ticks on your CV with clinical research, but do not limit yourself if you have a passion for basic science. Especially in

the case that you have been working on basic science research during your first 2 years, the research months can be extremely helpful for these longer term projects.

Applying

Start looking into VSAS early on (December-January) before VSAS tokens come out. Try to get all your immunization records up to date and collected as most of the programs will require these and these can actually be somewhat of a hassle to get. Most programs will not open their VSAS until March, but you want to have everything collected so that you can submit on the day these open, as many programs are first-come, first-serve for the busier months. Apply to places you are actually interested in, so that you can a) have a better chance of matching there and b) get to know the program well to see if you actually want to go there. Doing three away rotations is a great idea if you can fit it into your schedule for the same reasons listed above.

As for letters of recommendation, it is always good to get a more personal one from your research mentor or whomever you have worked closely with in the department. Most ortho programs will require at least 3 ortho letters (UCSF requires 1 non-ortho letter), and many programs want a chairman's letter as well. You can schedule a meeting with Dr. Schwartz to get this done at any time, preferably a couple months before ERAS applications go in. The best way to get other letters is to work hard during your subinternship and ask 2-3 of the attendings that you work with for letters – ask as soon as possible for the letters after your Sub-I so that they don't forget how you did.

Dr. Holt is the go-to faculty member for any burning questions you have about the application process or Vanderbilt's residency program. However, don't hesitate to contact the ortho interest group leaders first with any questions, as the ortho attendings' schedules can be very busy.

General Tips

- Take as much call as you can before your sub-I and aways. It will help you not only get to know how call works and how basic orthopaedic problems are treated, but you will also get to know the residents well who will be a great resource as you start applying.
- Handbook of Fractures, Netter's Concise Orthopaedic Anatomy, Hoppenfeld's Surgical Exposures in Orthopaedics, and Orthobullets are your best bets in terms of resources as a medical student.
- Keep working on your research projects during your easier months, it can really set you apart on the application trail.

Otolaryngology (ENT)

Courses

Within the department

- On Surgery Clerkship, you can do a 2-week specialty elective in Otolaryngology
- OTO 5310: Introduction to Otolaryngology
- OTO 5315: Introduction to Laryngology
- OTO 5325: Clinical Rhinology
- OTO 5335: Introduction to Neurotologic Surgery
- OTO 5340: Introduction to Facial Plastic and Reconstructive Surgery
- SURG 5625: ACE: Otolaryngology

Outside of the department

- Radiology, especially neuroradiology, builds familiarity with Head and Neck anatomy and teaches fundamentals of interpretation of common imaging studies
 - RAD 5610: ACE: Diagnostic Radiology
 - RAD 5640: ACE: Neuroradiology
 - IDIS-5626-08: ISC: Medical Imaging and Anatomy
- ICU: Many Head & Neck service and some Neuro-otology service patients will require ICU level care. Building familiarity with this system is helpful in managing these patients.
 - IDIS 5613: ISC: Critical Illness
 - SURG 5614: ACE: Surgery Critical Care
 - SURG 5621: ACE: Surgical Critical Care, VAH
- Preparation for Surgical Internship course
 - SURG 5930: AE: Preparation for Surgical Internship

Research

Timing

It's never too early or too late to get started on research; however, it's best to start as early in your medical career as possible for research-heavy, competitive specialties such as otolaryngology. During VMS1/2, try to get smaller projects to work on just to whet your whistle and make research connections. Focus on putting your all into those small projects – your efforts will be recognized. Dive deeper into more major projects during your research block and your immersion phase years.

Types of Research

The bottom line is that research is research. If you are productive in either the basic science or clinical realm, you will do well in terms of the application process. Clinical projects typically have faster turnaround times and often have a higher chance of first or second authorship. However, if you enjoy basic science more, such projects can carry equal rewards but may have greater initial investment of your time. Your research does not need to be in otolaryngology early in your medical school career, but should be at least tangentially related once you decide to pursue residency in the field.

Getting Involved

It would be safe to say that the majority of the faculty in Vanderbilt's otolaryngology department are involved in some kind of research. There are many ways of getting involved in research ranging from emailing and asking attendings for projects, to asking residents and fellows, and looking for emails from the Interest Group. Our experiences vary in terms of how we each got involved but if you are having any trouble finding a project, reach out to the interest group leaders for help.

Applying

Away rotations

Unlike some other specialties (e.g., orthopedics, emergency medicine) where doing an away rotation is virtually mandatory for matching, away rotations are in no way required to match. The reality of away rotations is that they are a double-edged sword: they have the ability to carry you far if you "crush" it but can virtually take you out of consideration at a school if you falter. Reasons for wanting to perform an away include: interest in specific program or region of the country, observing what a different program is like, etc. Talking with residents and attendings who know you well and have worked with you extensively can further help guide you in making these types of decisions.

Letters of recommendation (LOR)

It is mandatory that one LOR come from the chair of the department. At Vanderbilt, Dr. Eavey collates resident and faculty impressions to create the Chair letter (it stands to reason, then, that you would want to work hard and demonstrate your interest whenever you on service with ENT). Outside of the Chair letter, you will want to get 3 more LORs, at least two of which should probably be from ENT faculty. As with any other specialty, LORs should ideally be from people that know you the best and can speak to your many attributes that make you an excellent applicant and potentially an excellent resident. Given that ENT is a small field, there is something to be said for seeking out letters of recommendation from faculty who are recognized in the field. At the same time, this must be balanced with obtaining a meaningful letter. Please speak to the interest group leaders personally regarding further advice for selecting faculty for LORs.

Faculty members to contact

Robert Labadie, M.D., Ph.D. (Interest Group Faculty Advisor, Chief Research Officer) - General
 Robert Sinard, M.D. (Residency Program Director) - Head & Neck
 Edward Penn, M.D. (Advanced Clinical Elective Director) - Pediatrics
 Sarah Rohde, M.D. (Gabbe FAA) - Head & Neck
 Siva Chinnadurai, M.D. (Robinson FAA) - Pediatrics
 William Ries, M.D. (Introduction to Facial Plastic and Reconstructive Surgery Elective Director)
 David Haynes, M.D. (Introduction to Neurotologic Surgery Elective Director)
 James Duncavage, M.D. (Clinical Rhinology Elective Director)
 Gaelyn Garrett, M.D. (Introduction to Laryngology Elective Director)

Website resources

[Otomatch](#): a forum utilized by medical students applying in ENT. Not as robust in terms of information as compared to other specialty websites, but typically provides valuable information regarding the release and scheduling of interviews.

[Headmirror](#): a website providing a wealth of information regarding the specialty of Otolaryngology and career advising for both medical students and residents interested in the specialty.

Pathology

Courses (*highly recommended)

- PATH 5310: Elective: Pathology as a Career
 - This is a two-week elective offered in between core clerkships that serves as a basic introduction to the field of pathology. During this course you are exposed to the diverse subspecialties within anatomic and clinical pathology including surgical pathology, pediatric pathology, cytopathology, hematopathology, molecular genetics, transfusion medicine, microbiology, and chemistry.
 - This is a flexible course that can be designed according to your personal interests. See below (under PATH 5620) for a list of recommended areas to rotate through.
- *PATH 5620: ACE: Anatomic Pathology
 - Introduction to the Course:
 - If you can only take one pathology course during medical school, this is the one to take. This is a four week advanced clinical elective offered during the immersion phase. It is the “bread and butter” of pathology—surgical path. You can also rotate through cytopathology and pediatric pathology. You will spend one week on each rotation. Within surgical pathology there are numerous subspecialties to choose from including GI, GYN, Bone & Soft Tissue, and GU.
 - Flexible Course
 - This is a flexible course similar to the Pathology as a Career elective and can be designed according to your personal interests. Be sure to email the course director *one month in advance* to indicate your preferences.
 - Recommended rotations:
 - Surgical pathology→GI, GYN
 - Pediatric pathology (placenta is included in peds path)
 - Cytology (it helps to have GYN surg path before your cytology week)
 - Role of the medical student:
 - As a medical student you have the opportunity to gross specimens and preview slides with the residents. The more interest you show, the more they will let you do. I recommend getting as hands on as possible, especially with grossing.
 - Autopsy:
 - There are also opportunities to observe autopsies. It is essential to participate in at least one autopsy before choosing a career in pathology because you will be required to perform autopsies as a resident (although it is only a small portion of your training). The best way to get involved is to find out who the current resident on the autopsy service is and let them know you are interested in observing an autopsy. They will then notify you when a case comes up and you can leave the rotation you are on to participate in the autopsy. Sometimes there are multiple autopsies a day and at times there are no autopsies for an entire week so notify the autopsy resident early on in the rotation.

- Conferences
 - Attend as many morning and noon conferences as possible.
 - One of the conferences called, “Unknowns,” takes place at noon every Wednesday and is attended by both residents and faculty. The slides for the conference are put out in the resident room a few days before the conference for residents to preview. If you get a chance, preview the slides on your own. You will not get called on during the conference and it will be a great learning exercise.
 - You should also attend the multidisciplinary conferences including “death conference” at the VA.
- Preparation for this course:
 - A great textbook for this rotation is, “The Practice of Surgical Pathology: A Beginner’s Guide to the Diagnostic Process,” by Molavi. This is a quick and easy read that provides a concise description of the major pathologic diagnoses in each organ system.
- PATH 5630: ACE: Clinical Pathology
 - This is a four-week rotation in clinical pathology—the half of pathology that most people don’t realize is a part of this specialty (other half=anatomic path). During residency, 60% of your training will be in anatomic path and 40% in clinical path. This is the second most important course (after Anatomic Pathology) to sign up for if you are interested in exploring pathology.
 - This is a flexible rotation that can be designed according to your interest. Services include transfusion medicine/blood bank, chemistry, hematopathology, coagulation, microbiology, cytogenetics, and molecular genetics. You can rotate on two specialties per week (different specialty in the morning and afternoon).
 - Recommended rotations and best time of day to join the service
 - Transfusion medicine (AM)
 - Great preparation resources:
 - Vanderbilt transfusion medicine website: tutorials and presentations.
 - Blood bank guy (online, free): videos with accompanying notes
 - Hematopathology (AM)
 - Integrates AP and CP.
 - Coagulation (PM)—sign out is in the afternoon; try to pick up a couple of your own cases in the morning so that you can participate in signout.
 - Microbiology (PM)
 - Molecular Genetics (all day)
- PATH 5650: ACE: Clinical Microbiology
 - This is a four week advanced clinical elective that focuses on the laboratory diagnosis of infectious diseases. This course is recommended for students who have a particular interest in this area of pathology. If you do not have a special interest in microbiology, the exposure you receive during the Anatomic Pathology rotation is adequate.

- In the mornings, you will “round” in the microbiology lab and check out interesting specimens on the benches. You will have a one-hour didactic lecture. In the afternoon, there is signout during which patient cases are discussed. As a medical student you can present a couple of patients at signout. This involves presenting the medical history and the microorganisms that have been isolated thus far.
- PATH 5680: ACE: Forensic Pathology
 - This is a four-week rotation at the Nashville Medical Examiner’s Office. This is recommended for students with a special interest in autopsy. Be sure to first participate in a couple autopsies at Vanderbilt before signing up for this course.
- *IDIS 5620: ISC: Clinical and Molecular-Based Approaches to Cancer
 - This is an integrated science course that focuses on molecular alterations in cancer from both a clinical and research perspective. This is a great course to take since pathologists are responsible for interpreting molecular data. Additionally, as a future pathologist, it is likely that you will order ancillary molecular tests to aid in diagnoses and having a basic understanding in this area will be helpful. Furthermore, if you have an interest in research, pathologists are at the forefront of discovering molecular drivers of cancer.
 - This course consists of case and team-based learning sessions and clinical experiences in various outpatient clinics including medical oncology, radiation oncology, and surgical oncology (you get to choose which clinics you are in). You will also attend multi-disciplinary conferences and give a presentation on a topic of interest.
- IDIS 5626: ISC: Medical Imaging & Anatomy
 - This course is for students interested in radiology, in addition to pathology because it provides an in-depth review of human anatomy which is essential to the practice of pathology. Students get the opportunity to perform a cadaver dissection as part of the course.
- MED 5780: ACE: Medical Oncology and MED 5785: ACE: Hematology-Oncology
 - Each of these rotations provide many opportunities to visit the path lab and directly see the impact of pathologic diagnoses on patient care. Ask your attendings if you can spend a few half-days in clinic with them too. It is a great way to supplement your inpatient experience.
- Action Internships (AI)
 - Take an acting internship that seems interesting to you.
 - It is not necessary to take an AI before submitting your application.
 - If you do take an AI before applying for residency, this would be a good rotation to find a letter writer since you will need one LoR from a clinical (non-path) rotation.

Research

- Importance of Research in Pathology

- Most pathology applicants have had at least some research experience (not necessary in pathology). There is a disproportionate number of MD/PhDs in the field of pathology compared to medicine, surgery, pediatrics, etc. and there is a strong emphasis on research in many residency programs. It is important to demonstrate your interest in research during your pathology interviews and discuss projects you have been involved in especially if you are interested in training at a strong academic institution.
- Selecting a Project
 - It is not necessary to do research in pathology, but if you are interested there are many opportunities at Vanderbilt. Start off by deciding whether you are interested in anatomic or clinical pathology. Then decide on a specific specialty based on your path rotation experiences. Once you select an area of interest, approach the faculty who work in this specialty. They will guide you towards mentors with projects.
- Timing
 - Partake in research when it best fits in your schedule. It is helpful to do research after you have taken the Anatomic Pathology and/or the Clinical Pathology course because these rotations provide an opportunity for you to identify an area of interest and potentially a mentor.
- Quality improvement project
 - There are many quality improvement projects going on in the lab and this would be a good way to fulfill the QIPS portion of FHD. If you are interested in a QI project, approach the laboratory director for the specific lab you are interested in.

Away Rotations

- An away rotation is not necessary for applying into pathology especially since Vanderbilt has a large pathology department with many opportunities for students to rotate.
- On the other hand, an away rotation is a great way to see how things work at a different institution and gain additional experience in pathology.

Preparing Your Residency Application

- Mentors
 - Meet with the program director early on (Dr. Robert Hoffman) and then a few months before applying.
 - Faculty mentor suggestions:
 - Dr. Emily Reisenbichler (AP)
 - Dr. Henry Edwards (AP)
 - Dr. Alice Coogan (cytology)
 - Dr. Garrett Booth (transfusion medicine)
 - Dr. Joyce Johnson (AP)
- Step 2 CK
 - Check with each program on whether they require Step 2 CK scores before they will invite you to interview for their program.

- Extra-curricular Experiences in Pathology
 - Med School 101: Each year Vanderbilt offers this three-week summer course to gifted high school students as part of the Vanderbilt Program for Talented Youth. It is taught by fourth year medical students and is a unique opportunity to build your teaching skills. There is a pathology component to this course which offers an opportunity for students interested in pathology to conduct organ recitals and tissue microscopy sessions. You are responsible for preparing the material including selecting the organs and slides for each session. Look out for an email from Dean Bonnie Miller in May if you are interested in participating.
- Personal Statement
 - In your essay convey your interest in the three important areas of pathology
 - 1. Clinical diagnostics
 - 2. Research
 - 3. Education
 - Ask 1-2 of your pathology mentors to review it before submitting.
- Letters of Recommendation
 - Three letters required (max of four)
 - Two letters: pathology attendings (at least one attending who is a full Professor—this is not required by preferable)
 - One letter: clinical rotation (clerkships, ACEs, AI, etc.)
 - Optional: letter from research mentor
 - Start building relationships with faculty you work with during your AP or CP rotations. Signout with them a couple additional times if possible outside of the rotation so that they get to know you better. Most attendings are more than happy to write you a letter. Send them a copy of your CV and your personal statement when requesting a letter.

Pediatrics

Courses

What courses should I take?

In general, there are many wonderful courses in pediatrics offered at Vanderbilt. The approach to scheduling your courses will depend on individual interest and curriculum requirements. You should take at least one acting internship/sub-internship in pediatrics; use this opportunity to immerse yourself in the experience and get a little taste of intern year. Otherwise, other course selections will depend on your preference and curriculum requirements, you may wish to consider the following factors:

- Is there an area of medicine that interests you that you have not adequately explored thus far? For example, though the obesity ISC is not expressly related to pediatrics, this will be a topic that will likely be encountered often in your future practice in pediatrics.
- Is there an area of pediatrics that you are interested in but have not had the time to explore? This is one of the most popular questions you will be asked on the interview trail: do you know what you want to do within pediatrics? You can use the immersion phase to begin to answer this question. At least if you've tried it, you have a good reason to talk about what you've liked so far....
- Are there consulting services that will not be included in your future residency that you would like to explore? Perhaps dermatology, pediatric surgery or pediatric radiology would be useful to a future pediatrician.
- How many other extracurricular responsibilities are you juggling? For example, during the interview season, take less demanding classes with flexible time lines or use your flex months at this time.

Research

When should I schedule research?

While research/publications can help strengthen your application and make you a more well-rounded and competitive applicant, it is not expressly required for pediatrics. You should schedule your research at a time that is convenient for you.

If you think your research will result in a publication that directly applies to your interests in pediatrics, it may be in your best interest to schedule your research months early during the immersion phase. If you are less interested in research and would prefer to focus on taking ISCs/AIs/ACEs instead, that is also acceptable.

What type of research would be most helpful to my application?

Again, research is not expressly required for pediatrics, but is something top programs look favorably upon. If you can find a project that aligns closely with your personal career interests (ie: you want to go into infectious disease and you work on a project aiming to identify

virulence factors in viruses), it would be something to talk about in your personal statement and during interviews. At this point in your training, however, working on research is more about learning the process than achieving outcomes, so choose a project that is interesting to you and something you can comfortably discuss during your interviews.

Residency Applications

Do I need to do an away rotation?

Away rotations are not a requirement for Pediatrics. Each year Vanderbilt successfully matches students into pediatric residencies, some of whom have completed away rotations, and some of whom have not. The decision of whether or not to do an away rotation is a personal one. Reasons to consider doing an away rotation include:

- 1) Wanting to check out a specific program
 - a) Example: You think you want to go to UCSF, but don't know if you'll actually like the program/people there.
- 2) Wanting to show a specific program that you are interested in them
 - a) Example: You want to go to University of Washington, but don't have obvious ties to the area.
 - b) Example: You know you want to go to Boston Children's but want to make sure that you'll get an interview there.
- 3) Wanting to try living in a specific city
 - a) Example: You are interested in Columbia's residency program, but you're not sure if you could handle living in New York City.

When scheduling away rotations, remember that you must be "on" at all times during that month. Some people call away rotations "interview months" because your attitude and performance over the month can have a significant impact on your application to that program. You should **not** schedule other courses/commitments during your away rotations.

When and how should I ask for letters of recommendation?

Luckily for you, Vanderbilt is a teaching hospital, and most pediatric faculty will be expecting you to ask for a letter of recommendation if you tell them you are going into peds. The sooner you can ask, the better. If you are taking your AI/sub-I/elective early in the season (before July), it is ok to wait until the end of your course and see how you felt about your performance before asking for a letter. During or after July, however, you should consider asking for a letter before the rotation is over to give your letter writer adequate time to finish the letter.

Who (in the Department of Pediatrics) would be good to talk to about applying?

- Dr. Rebecca Swan - Pediatric Residency Program Director
 - Dr. Swan will meet with everyone who is planning to apply to pediatrics. She is happy to help with any questions you may have about pediatric residency, including which programs to apply to.
- Dr. Atia Jordan - Pediatric Clerkship Director, Pediatric Interest Group Advisor

- o Dr. Jordan will also meet with everyone who is planning to apply to pediatrics. She will also help write your Chairman's Letter from Dr. Weber (Chair of the Department of Pediatrics).
- Dr. Travis Crook - Pediatric Interest Group Advisor
 - o Dr. Crook loves teaching, and has recently started advising the Pediatrics Interest Group. He would be happy to answer any questions you may have about the application process, or pediatrics in general.
- Dr. Bill Cutrer
 - o Dr. Cutrer is a pediatric critical care attending in addition to being one of the fearless co-leaders of Batson and the curriculum 2.0 immersion phase co-director. He would be happy to advise any student (not just Batsonites) on a career in pediatrics.
- Dean Amy Fleming
 - o Dean Fleming is a pediatric hospitalist in addition to being our beloved Dean of Students. She is also the former pediatric clerkship director. You will sit down with her in your fourth year to write the MSPE (formerly known as the Dean's Letter), but she can be a great resource to advise you on the whole process from application to match list rankings.
- Current Peds Residents
 - o The current pediatric residents (especially the interns) can be a huge wealth of information about the application process. Having just gone through the process themselves, they can answer questions about what to expect on the interview trail, what they thought about specific programs, and what things are important to look for in programs.

Plastic and Reconstructive Surgery (PRS)

Courses

- From the new Immersion requirements, you will need ACE: Plastic Surgery as Sub-Internship and an Acting Internship in Surgery (total of two blocks).
- Other useful courses:
 - o ISC: Critical Illness
 - o ISC: Injury, Repair, & Rehabilitation
 - o ISC: Medical Imaging and Anatomy
 - o ACE: Critical Care, VU
 - o ACE: General Surgery, STH
 - o ACE: Oral and Maxillofacial Surgery
 - o ACE: Otolaryngology (Facial Plastics)
 - o AE: Preparation for Internship

Research

- You don't have to do plastic surgery research, but faculty in PRS department are friendly and usually have various projects going on. Also, it can be helpful to talk to the fellows.

Applying

- Schedule a meeting with Dr. Bruce Shack, chair of the department.
- Students are recommended to schedule away rotations, 1-3 during the Immersion Phase. These should be scheduled in the summer after the home sub-I. Be wary of application deadlines as early as March and April, and also the timing that don't necessarily fit our immersion blocks.
 - o Aways are usually 4 weeks, although some are 2 weeks. Check the VSAS clearinghouse for program dates and availability
 - o Some programs like to take rotators, up to ~50% in some PRS residencies.
- It is a good idea to ask Dr. Shack for a department chair letter after rotating on plastic surgery, in addition to other surgeons. Usually other plastic surgeons are ideal and well-received.
- You can also talk to Dr. Rueben Bueno, Associate Professor or Dr. Kye Higdon, Assistant Professor about residency programming.

Preventive Medicine

About Preventive Medicine

Preventive Medicine is practiced by all physicians to keep their patients healthy. It is also a unique medical specialty recognized by the American Board of Medical Specialties (ABMS). Preventive Medicine focuses on the health of individuals, communities, and defined populations. Its goal is to protect, promote, and maintain health and well-being and to prevent disease, disability, and death.

Preventive medicine specialists are licensed medical doctors (MD) or doctors of osteopathy (DO), who possess core competencies in biostatistics, epidemiology, environmental and occupational medicine, planning and evaluation of health services, management of health care organizations, research into causes of disease and injury in population groups, and the practice of prevention in clinical medicine. They apply knowledge and skills gained from the medical, social, economic, and behavioral sciences.

Preventive medicine has three specialty areas with common core knowledge, skills, and competencies that emphasize different populations, environments, or practice settings: aerospace medicine, occupational medicine, and public health and general preventive medicine.

-from ACPM.org "What is Preventive Medicine"

Courses

Preventive Medicine is a broad field, and students can explore their interests through many of the courses taught at Vanderbilt. Primary Care Medicine, for example, is always a good foundation for Preventive Medicine doctors. For specific disease processes that Preventive Medicine doctors spend considerable time thinking about, IDIS 5621: Cardiovascular Disease, IDIS 5622: The Skinny on Obesity, IDIS 5623: Addiction, IDIS 5624: Diabetes Mellitus, MED 5655: Geriatric Medicine and MED 5680 Infectious Diseases would all be excellent choices, depending on the student's interests. More directly related to population health, IDIS 5614: Community Healthcare and IDIS 5618: Global Health would provide the student with practice managing a population of patients.

Research

Research time for those interested in Preventive Medicine should be largely flexible. Clinical research would be applicable, as well as policy research, quality improvement, modeling or public health interventions. The best times to do research will depend largely on the availability of the investigator with whom the student will be working. Finding the right fit and right advisor for a research project in these areas should be easy; see below for a list of professors with which to begin your search.

Applying

Preventive Medicine, at many schools, is a residency that you must apply to following PGY-1. Some programs, however, have combined Family/Preventive Medicine or Internal/Preventive Medicine residencies. Either could be a good option if you know Preventive Medicine is your career goal but would like another skill set to compliment it.

For away rotations, there are several locations with opportunities for students interested in Preventive Medicine. The CDC's Epidemiology Elective and the Johns Hopkins Elective in Preventive Medicine are two such programs open to fourth year medical students. Additionally, Meharry has a Preventive Medicine residency, and it may be possible to arrange a rotation with their residents.

Faculty

Some faculty who would be excellent to talk to in beginning your exploration of Preventive Medicine:

William Schaffner, MD; Immediate Past Chair, Department of Preventive Medicine

Email: william.schaffner@vanderbilt.edu

Melinda Buntin, PhD; Chair, Department of Health Policy

Email: melinda.buntin@vanderbilt.edu

Sten Vermund, MD, PhD; Director, Institute for Global Health

Email: sten.vermund@vanderbilt.edu

Muktar Aliyu, MD, MPH, DrPH; Associate Professor of Health Policy

Email: muktar.aliyu@vanderbilt.edu

Psychiatry

Away Rotations

Away rotations are not required due to the less competitive nature of the psychiatry match. That being said, if there is a program or geographic area you are particularly interested in or if you just want to see psychiatry outside of VPH, it is definitely okay to go somewhere for a month or even two. Because psychiatry interviews rarely depend on an away rotation, some people like to do away rotations after an interview as a way to decide between programs. Keep in mind, however, that this may still be considered an “audition” at that program and will likely affect your rank list position (positively or negatively). Of the students going into psychiatry for the past two years (2015 and 2016), none did away rotations.

Research Opportunities

There are a vast array of research opportunities in psychiatry, in anything from neuropsychiatry to ethics and spirituality. The Vanderbilt psychiatry department has the majority of their research investment in the areas of functional neuroimaging as well as schizophrenia. If these are not your areas of interest, it is still possible to do other projects. A great resource for both mentors and ideas is the Vanderbilt Center for Biomedical Ethics and Society, which is an interdisciplinary center run by psychiatrist Keith Meador. It is highly recommended to set up a meeting with the psychiatry clerkship director Terako Amison or former clerkship director and current residency director Ronald Cowan to point you in the right direction and set you up with the right people.

Recent Project Mentors and Area

- Dr. Ron Cowan: functional neuroimaging
- Dr. Andy Michel: spirituality, community medicine
- Dr. Keith Meador: psychiatry, religion, ethics
- Dr. Stephan Heckers: schizophrenia, first break psychosis

Good Advisors

- Dr. Sheryl Fleisch is the associate residency training director and is a great resource for students interested in the field. She has an interest in medical student education. She is currently quite busy with the new Vanderbilt Street Medicine program, which was an expansion on her Vanderbilt Street Psychiatry program. She is passionate about working with the homeless community.
- Dr. Amanda Wilson leads the Emergency Psychiatry clerkship. She enjoys undergraduate medical education and is open to students interested in shadowing.
- Dr. Ronald Cowan, former psychiatry clerkship director and now residency program director is very available to students interested in psychiatry research. He has been very helpful to students in the past.
- Dr. Terako Amison is the new psychiatry clerkship director and is a great resource for students with questions about psychiatry as a career.
- Dr. Nathaniel Clark is also a great resource for students thinking about psychiatry.

- Dr. Keith Meador is a great mentor for individuals interested in ethics, health policy, religion, or the wider range of medical humanities.

In general, the psychiatry faculty are very approachable people that enjoy having students on service and research projects. Don't hesitate to contact any of Vanderbilt psychiatry faculty if you are interested in a certain attending's research or just wanting to learn more.

Recommended Courses

The psychiatry department offers multiple fourth year psychiatry rotations listed below. Note that with the new curriculum, the course name and number may be slightly changed, as well as the months in which it is offered.

Adult Consult-Liaison [VUH]

- Adult C/L is typically very busy and you will see a lot of delirium, capacity assessments and patients with multiple medical comorbidities. You are given a lot of autonomy, but it can be a difficult adjustment if you haven't done CL during the core psych rotation

Neuropsychiatry (Geriatrics) [VA]

- Issues commonly encountered in neuropsychiatry include Alzheimer's as well as other forms of dementia. There is more emphasis on neuroimaging in diagnosis.

Adult Inpatient [VPH]

- You can try to request certain units or attendings if you schedule in advance.

Adult Outpatient [VPH]

- Clinic based

Adult Addictions [VPH]

- Addictions is with Dr. Peter Martin.

Child and Adolescent Consult-Liaison [VCH]

- Less busy, but more autism and eating disorders than adult consults.

Child and Adolescent Inpatient [VPH]

- This rotation also takes place at VPH but rounds and functions separately from the adult services.

Emergency Psychiatry [VUH ED]

- This course is with Dr. Amanda Wilson in the Psychiatric Triage Unit (PTU) in the ED. It is related to the consult service, but more focused on triage of acute presentations in the ED and development of appropriate care plans.

It is recommended to do a sub-internship in medicine or neurology in addition to at least one fourth year psychiatry rotation. Some programs require a medicine (or medicine or neurology) sub-I, so check the program websites for specific requirements. It is not mandatory and people have matched well without one.

Other relevant fourth year courses for students interested in psychiatry include:

- Child Abuse Pediatrics
- Endocrinology
- Palliative Care
- Medical Ethics

Please Note!

Currently the only “Acting Internship” offered by the psychiatry department is **PSYCH 5639: AI: Inpatient Child and Adolescent Psychiatry**.

The department administration states “We are working to offer a broader range of courses.

Even so, I would recommend that students interested in Psychiatry complete an AI in medicine or critical care in addition to any psychiatry courses that are ultimately offered. This experience will be important for internship.”

Radiation Oncology

Courses of Interest

- RADO 5315: Introduction to Radiation Oncology (2 week course)
- RADO 5620: ACE Radiation Oncology (4 week course)
- IDIS 5620: ISC: Clinical and Molecular-based Approaches to Cancer

Research Opportunities

- Research is pretty much a requirement for this field. If you are sure you are interested and don't have much experience, it would behoove you to get on board as soon as possible. The residents are excellent contacts to approach for this, as each of them has at least 12 months of dedicated research time during residency and are always working on projects. Faculty members are also very approachable; most of them are working on projects with or without residents and would welcome a medical student's collaboration.

Applying

Before Clerkships:

- Step 1 Exam: average score of matched applicants around 240, but this is one of many considerations
- Research involvement: in no other field is research as important as it is in Rad Onc (see above)
- Networking: because it is such a small field, start getting to know faculty/residents early

During Clerkships:

- Try to do well on rotations: especially in Medicine and Surgery
- 2-week elective in Rad Onc
- CiM 2-week multispecialty elective (much less dedicated exposure/networking opportunities than above)

After Clerkships:

- Home rotation in Rad Onc at Vanderbilt's Department (1 month)
 - \pm 1-2 away rotations: for face time/networking/LoRs (highly recommended)
- Letters of Recommendation: 4 letters, at least 2-3 Rad Onc
 - Possible writers: Dr. Chak (PD); another Rad Onc faculty; 1 non-Rad Onc faculty (e.g. research mentor, Internal Medicine [some programs require one]); non-Vandy Rad Onc (e.g. from away rotations)
- Continue research: take as many projects to completion as possible before ERAS opens on September 15th
- ERAS: personal statement, Dean's letter (MSPE), uploading CV

Advisors/Contacts

- Anuradha (Bapsi) Chakravarthy, MD [Dr. Chak] – Program Director
<bapsi.chak@vanderbilt.edu>
- Mark Stavas, MD – Medical Student Clerkship Director
<mark.j.stavas@vanderbilt.edu.>
- Eric Shinohara, MD, MSCI – Associate Professor
<eric.t.shinohara@vanderbilt.edu>
- Albert Attia, MD – Assistant Professor
<albert.attia@vanderbilt.edu>

Please do not hesitate to contact interest group leaders at any time. We are always happy to meet and chat with any of those who are interested to address questions you may have.

Diagnostic Radiology/Interventional Radiology

Courses

Classes within the department that are good to take: All of the radiology electives (DR, Peds, IR, Neuro)

Classes outside the department that are useful: Anatomy ISC may be useful--haven't taken it yet

Things to consider when registering for classes (order, pre-requisites, etc.): Anatomy ISC may be a prereq for other radiology electives..that's been going back and forth. Otherwise, order doesn't really matter. May be useful to take DR before IR, but really not completely necessary.

When to take the acting internship in curriculum 2.0: We don't have an AI. People have taken surgery, medicine, or neuro stroke (when it was an option). Surgery may be preferred if applying to IR.

Research

When to schedule research time: try to have papers/presentations before you interview. Residencies LOVE to talk about research and really seem to want researching radiologists.

Types of research that might be more helpful (basic science vs clinical, etc): anything that gets you papers/presentations. If you have a limited time, may want to consider clinical to get the most out of it.

Applying

If and when to schedule away rotations: not necessary (discouraged for DR), may change for IR, but as of now, you don't need them.

When and how to ask for letters of recommendation within the department: Ask for letters from people who actually know you. Try to do a mini research project with some of the faculty to get letters from them (Hilmes (peds), Fleischer (US), Brown (IR) tend to have lots of projects--others might as well).

Good faculty members in the department to talk to about applying: Omary is such a great resource and loves med students, set up a meeting with him! Dr. Deitte is also a great resource!

Urology

Courses within Urology

- Urology sub-i /acting internship (best to take May - August) depending on your away rotations
- Pediatric Urology or another create your own elective within the department

Courses outside of Urology

- This is really very dependent on your interests. Some students across the country rotate on nephrology or ICU months.
- 2-preparation for surgical internship
- When registering for classes, prioritize your sub-internship and place electives in months that you are considering away rotations that you can drop if needed. An additional surgery course before your sub-internship can be helpful but is not required.

Research

- I scheduled my research April June October. My mentor was very flexible knowing about away rotations but make sure you run this by them. I would recommend clinical research so that you have this flexibility. There is a great basic science lab within the Urology department so an alternative would be three contiguous months earlier in the year.

Applying

- The majority of Urology applicants do multiple away rotations (2-3), however Vanderbilt students traditionally only need 0-1. Your away rotation is very important since they know you personally and are more likely to interview, rank, and match you, so make sure you go to a good usually top tier program. Get on VSAS early. The requirements are a huge hassle and student health has a shockingly long turnaround for filling out immunization forms. Apply to 4-5 places. Some places then required personal statements and a letter from a urology mentor so have that ready when applying. Ask early for the letter.

When to schedule away rotations

The traditional months for away rotations are June, July, and August. September is also common but more difficult since your ERAS application is due during that period.

When and how to ask for letters of recommendation within the department

I emailed to ask for some of my letters or scheduled a meeting to ask for a letter. Their time is precious, however, so it is sometimes easier to also ask for advice on where to apply, etc, at these in person meetings.

Good faculty members in the department to talk to about applying

Dr. Clark, Dr. Chang, Dr. Penson, Dr. Kaufman, and Dr. Thomas are pretty approachable and knowledgeable about stuff in the field of Urology.

The Atlas: Part III

Year Out Options

This section provides an overview of options for taking a year out, including some student perspectives. There are a wide variety of opportunities to pursue in a year out. What follows is a brief overview of some of the more common options.

[Research](#)

[Dual Degrees](#)

- [MD/MBA](#)
- [MD/MPH](#)
- [MD/M.Ed.](#)

Yearlong Research Options

Please note: This is meant only as a guide to thinking about yearlong research options from a student's perspective. For detailed information on specific programs and the application process, please contact the Office of Medical Student Research (<https://medschool.vanderbilt.edu/student-research/>).

(Portions of this section by Shanik Fernando are adapted from Headmirror.com with permission)

Reasons to take a research year

When considering taking a research year, it's important to think first of what you hope to gain from the year. Extending medical school by a year means prolonging your training and losing out on an extra year of being an attending, with all that that entails. On the other hand, a well-planned research year can be a powerful foundation for the rest of your career. Commonly cited reasons to take a research year include:

- The opportunity to gain experience with research:** While this may seem obvious, a year of laboratory research can be an opportunity to discover an entirely new career path. It may not be feasible for you to pursue basic science research within the standard four years of medical school depending on how you organize your schedule, and a year of research may be your only chance. Clinical medicine is built upon a foundation of basic science research, and a year of research may lead you to someday make laboratory research the focus of your career. It's important to keep in mind also, that the "research" in a research year is defined broadly. Although basic science research is often what comes to mind when thinking about a research year, there are plenty of opportunities to conduct research outside of a laboratory setting also, as we'll talk about below. Even if you do a year of basic science research and eventually decide to limit your career to clinical medicine, the skills you develop through doing a year of research, skills like grant-writing and evaluating the scientific literature, are universally applicable across the spectrum of career options.
- Build your CV:** To start with, doing a year of research purely for resume-purposes is a bad idea. A research year is a contract between you, your mentor, and oftentimes a fellowship organization. You must be willing to dedicate a significant amount of effort over the course of the year to full-time research, while in return your mentor and your fellowship organization promise to support your learning in return. The application process and the year itself can be grueling at times, and chances are that if you are purely in it for an extra section on your CV, you won't enjoy the year or perform as well. That being said, a productive year of research is an excellent boost for your CV, particularly if you obtain funding from a competitive fellowship. The ability to develop and then carry out a yearlong project shows an intellectual depth and tenacity that residency programs look upon favorably. Most students also go on to residencies based at academic medical centers, where research is a key pillar of the academic mission. This is particularly important in some specialties where research is heavily emphasized (see [Part II](#), Specialties Overview), but the ability to contribute in an academic setting can set your application apart regardless of your desired specialty.

- **A year of growth prior to residency:** Some students will say that the primary reason they took a year is because they “wanted to take a break from the pressure and lifestyle of the hospital.” While the pace of a research year is most commonly slower than that on the wards, that does not mean a research year should be used as a year to just relax. Students approaching the research year with this mentality will harm themselves due to lack of production, leaving residencies asking “what exactly did you do during this year?” To that end, students should look to the research year as a year for growth from a primarily academic perspective. Goals for students will vary depending on personal interest but the unifying theme will be that of enriching one’s education through the research year. Students should understand that stepping into the research world from the hospital can be a bit of a culture shock. Where the needs of the hospital/patients can dictate life when on the wards, in the research world one is given much more flexibility regarding the timing of work. This can be deceptive in that it may seem as though there is less work to be done. However, the flexibility of research time is in fact a responsibility that falls upon the shoulders of the student to drive what they get out of the year. Therefore it is important to carefully keep track of projects by working closely with mentors and planning the progress of research work in order to ensure productivity.

Expectations for a research year

If you are planning on taking a research year, it is important to note that there is a big difference between a research year and taking a year off. While students use the terms interchangeably, it is advisable to maintain the *mentality* of taking a “research year” rather than taking a year off. A “research year” implies productivity for the year. While it is difficult to predict which projects may lead to publication and which projects will dead end, students should strive achieve manuscript submission by the end of the year from their core research project, or at least have a manuscript in the works. As mentioned earlier in this segment, we suggest picking up smaller clinical projects which are more apt for a relatively faster turn around in order to demonstrate some productivity for the year of research. That said, you will be judged for the productivity of your core research production

Production during the research year cannot be stressed enough. The “bar” for production will be held higher for students taking a research year than those who have not. Further, when on the interview trail your work during the research year will most certainly come up. Anecdotally, it has been reported that there are certain members of departments whose role is to “sniff out” low quality research work, or exaggerated claims of research. Be ready to talk about your work intelligently and at length while demonstrating a clear interest in your work. Not being able to do so would be *detrimental* to your application.

Broad categories of extended research options

- As noted above, it is highly recommended that you use the resources available through the Office of Medical Student Research as you consider research options.
- In general, the main decision point in thinking about research options is laboratory research versus non-laboratory. Certain research fellowships (HHMI, for example) only

fund basic science/translational research, while others, most notably the Vanderbilt Medical Scholars program, provide funding for a wide variety of types of research.

- Non-laboratory “research” can encompass an incredibly broad range of scholastic inquiry. Some students choose to pursue clinical research over the course of a year, while others choose options such as bioinformatics or epidemiology that may not fit precisely into the basic science versus clinical research dichotomy. Quality improvement is also an important option to keep in mind when considering year-out possibilities. In addition, many students choose to take their year-out at other institutions or even in another country, so you are not limited by what may be available at Vanderbilt.
- Besides a year of research, there are also other possibilities for extended academic inquiry. Thanks to Curriculum 2.0, we now have the ability to take six months of dedicated research time within the standard four-year curriculum. Depending on what project you’re considering, this may allow you to accomplish everything you would like to do and still graduate on time. As far as yearlong options go, Vanderbilt offers many dual degree programs, some of which, including the MPH and MS in Biomedical Engineering, may include a research component. (For more information on dual-degree options, see the next section).

Tips for applying for research funding and general advice

- **Choose a mentor wisely:** *The choice of mentor is the most important part of your application and your overall experience.* You want to find a mentor who has a track record of success, but you also want a mentor who has enough time to help you through the application process and the project itself, which may not be possible with some senior investigators. Unless you have a longstanding prior relationship with a mentor (having worked together for three months during the Research Immersion, for example), it is highly recommended that you meet with multiple mentors. This is a good way to gain perspective on the different options available, as well as to make connections within the department. It is also highly recommended that you try to get in touch with students who have previously worked with your possible mentor. If a potential mentor doesn’t have time to meet with you, it’s probably a good clue that he or she is too busy to be a strong mentor. Some students have found that working with a junior investigator in the same group and then having the senior investigator as a co-mentor is a very effective set-up.
- **Choose a project wisely:** This springs largely from working with a good mentor. In general, if a mentor has a strong track record of mentoring medical student research, you can feel safe that any project he or she suggests will be appropriate for a yearlong research project. Where problems can arise, however, is with a mentor who may have a very strong history of producing good research from a large lab but little experience with mentoring medical students on yearlong projects. It is important to find a project and a mentor where you will not simply be lost in the shuffle. As one potential mentor told me when I was looking for projects, ***the worst outcome of a research year is to fail to have accomplished anything at the end of it.*** This can be very difficult to explain in residency interviews, and may undo any benefit that a research year would

otherwise have for your CV. It is essential to find a mentor who can guide you towards a project that is appropriate for a medical student over the course of a year and then support you throughout that project.

- **Start early:** It takes a long time to meet with multiple mentors, discuss various projects, and then craft an application encompassing multiple essays each requiring multiple drafts. A good place to start is to look online to find people who are doing research that interests you. Many departments have a designated person to help medical students find research opportunities. Getting in touch with this person and discussing the potential mentors you've found to be doing interesting research can be a good way to build contacts and narrow down your search. The Office of Medical Student Research can be helpful during your search as well.
- **Don't worry too much about what specialty your research is in:** It's ideal if you know what you want to do with your life and you find a good mentor within your desired specialty. Many students do not enter the research year knowing exactly what they want to do. The most important thing is to find a strong mentor and a project where you will have the opportunity to learn and contribute. Residency programs will still look favorably on a research year that's been done well, even if the research falls outside of the scope of that specialty.
- **Seek out recommenders who can speak to your research potential:** Remember that you are applying for research fellowships. You may have had a great relationship with a particular attending you encountered during your clinical rotations, but if he or she isn't involved in research, that may not be the best person to ask. On the other hand, if that person also runs a lab, he or she may be a good recommender to discuss your future research potential. Don't forget too that undergrad professors can be a good source of research-oriented recommendations as well. In general, *it's good to meet with potential recommenders in person and provide them with information on the key points they could address in your recommendation (beyond just your CV).*
- **Think about where you want to live during your research year:** One of Vanderbilt's strengths is the extensive research opportunities available here, but remember that you are not limited to staying in Nashville. This can be a powerful opportunity to build connections at another institution and see what living in another part of the country (or the world) is truly like. For example, for the HHMI Medical Research Fellows Program, you can conduct research at any academic or nonprofit research institution in the United States, at the Janelia Research Campus in Virginia, or at a program in South Africa. It can be overwhelming thinking through the incredible amount of options available, but here again using the internet to find what interests you and then taking advantage of the resources available here at Vanderbilt can help guide you as you search for research opportunities elsewhere.
- **Get involved in the department:** For students taking a research year, it is advisable to make use of extra time allowed to network within whatever department they are interested in. This may entail shadowing, going into the OR, or going on call. Use this opportunity to expose yourself further to the field and maintain some semblance of

clinical involvement during the research year. It should be common sense however that one's focus should remain on accomplishing research tasks and that gaining exposure/networking is a secondary goal during the research year. It is advisable to prepare and act during these experiences as you would during an actual rotation. These impressions will, positively or negatively, last and be how the department views you as a candidate. It is also important to recognize that you should defer to clinical students who may be on service or rotation given your own flexibility and ability to pursue opportunities with shadowing.

- o Furthermore, exposure to your department may lend itself to getting involved on clinical side projects which can help achieve further research production and establish professional relationships in the department. Again, the focus of the research year should definitely be your core research project. However clinical side-projects are useful for the aforementioned reasons...as long as they are not taking away from your core research work.

Planning for fourth year following a research year (applicable to MS3 students)

An important consideration for students taking a research year is making sure that they make the necessary preparations for returning to the fourth year. This includes planning fourth year scheduling in light of leaving and returning to medical school. It is important to make your school aware of your plans but remain plugged in regarding academic announcements and class registration. Students can often be accidentally left out of medical school programming related to class registration or “the match.” It is important to remain proactive and conscious of what is going on at your home institution during the research year.

Minor points:

- It is generally advisable to keep your clinical skills intact. While you will most certainly lose a step compared to students going straight through, participating in activities such as volunteering at a student-run medical clinic like Shade Tree may help stave off some of the rust.
- STEP II CS/CK: In general, get these exams out of the way before your research year or as early as possible during the research year. Your clinical knowledge will fade as you immerse yourself in research. In addition, it will be difficult to be fully dedicated to research and also take significant time to study.
- Consider that some research fellowships have strict beginning and ending dates. The sooner you start thinking about how these will affect your fourth year planning, the better

Dual Degree Programs

Over the last few years, more and more medical students have chosen to pursue dual degrees. Vanderbilt University School of Medicine has 10 dual degree programs, including degrees in public health, business administration, education, law, divinity, and computer science. Some questions to ask yourself before choosing to pursue a dual degree include:

- Is now the best time?
- Can I afford it?
- Is a second degree necessary for my career goals?

To answer specific questions about your desired degree, it is a good idea to talk directly with medical students and faculty who have obtained the dual degree you are interested in.

There are several benefits to taking a year off during medical school instead of later, like during residency or fellowship. One advantage is that many programs allow MD students to complete the additional degree in fewer years (1 or 2 extra years, instead of 2 or 3). Further, taking a year off allows MD students to take more time to carefully consider their specialty choice and career goals. Finally, some students find that taking a year off prevents burn out, allowing them to step back from medicine and take a new perspective on their education.

Listed are some details about a few of the more popular programs at Vanderbilt.

MD/MBA (Master of Business Administration)

The Healthcare MBA is a good path for students who are interested in understanding how the healthcare system, finance, medical and information technology, entrepreneurship, regulation and policy fit together. MD/MBA degree graduates can find careers in healthcare consulting, pharmaceuticals, biotech, medical devices, managing private practices, and hospital operations or administration.

At Vanderbilt, the MD/MBA degree is a 5-year program, or one extra year out of the medical school. The first three years are spent in medical school, the fourth year at the Owen School, and the fifth year is a combination of work in the business and medical schools. If students are interested in pursuing their MBA at a different institution, it typically requires 2 additional years.

To apply, students must take the GMAT. A couple of weeks of studying should be sufficient to excel in the GMAT. Students typically apply at the beginning of their third year. Applications to Vanderbilt Owen are on a rolling basis, with financial aid prioritized to those who apply in the first few rounds.

MD/MPH (Masters of Public Health)

The MD/MPH degree is an attractive option for students interested in preventive health, global health, and healthcare policy. At Vanderbilt, the program is approximately 15 months for

medical students - one semester of didactic courses in basic MPH skills, one semester of global health (or epidemiology) specific coursework, and then a practicum and thesis work. The MPH also counts as research credit. The Vanderbilt MPH program has global health, epidemiology, and health policy tracks that you will choose from when you apply.

Students can apply in any year, and the MCAT is accepted in place of the GRE. The application is on SOPHAS, a user-friendly online system, and is due in December. SOPHAS is a standardized application that many MPH programs across the country use. It requires a general personal statement, test scores (MCAT), a CV, transcripts, recommendation letters (typically three), and +/- interview.

MD/M.Ed. (Masters of Education)

The MD/M.Ed. is a great fit for students interested in having educational responsibilities as a large part of their career. At Vanderbilt, students complete both degrees in five years, with the first 3 years in medical school, the 4th year at Vanderbilt's Peabody College of Education and Human Development, and the 5th year as a split between medical and education coursework. The specific department at Peabody is the Department of Teaching and Learning, and the degree is in Learning and Design. While Vanderbilt does not have a healthcare-specific M.Ed. degree, there are several programs across the country that do focus on medical education, including Harvard and University of Miami. Take some time to explore different programs online and to talk to your peers and faculty before choosing which program(s) to apply to.

The application process is a pretty standard graduate school admissions process. Most applications require undergraduate and medical school transcripts, a personal statement (MD/M.Ed. students typically focus on explaining how and why they want to combine their MD with an M.Ed), and three letters of recommendation. At Peabody, MCAT scores may be used instead of taking the GRE, but at other institutions, the GRE may be needed. There is no interview for Vanderbilt's program. For a traditional "Fall Semester" enrollment, the deadline for application is December 31 of the prior year. Students can also begin in the "Summer Semester" with the same deadline, but to start in the "Spring Semester", applications are due by November 1 of the prior year.

Other programs

More details about other programs are included here:

<https://medschool.vanderbilt.edu/md-dual-degree-programs>.

Staying connected to medicine during the year(s) off

Some students chose to solely focus on their additional degree during their time away from medical school. However, others tried to stay connected with medicine in their year off by shadowing, volunteering at Shade Tree once or twice a month, and staying active amongst

class committees and extracurriculars. Some students also worked with medical faculty on degree-related research projects to maintain a connection with medicine.

Coming back to medicine after completing the additional degree

Most students agreed that coming back to medicine after the additional degree was nerve-wracking but went relatively smoothly. Here are some specific responses from students on how their transition back to medicine went:

- I was admittedly nervous having not done anything clinical in 12 months, but it was amazing how fast it all came back to me. The big concepts flood back. The details of minute diseases were slower. After a month you definitely have the hang of it again. - Stephen Dorner, MPH
- I felt like I had forgotten a lot, but it came back quickly. To make the transition smoother, I looked at old notes during the month leading up to my first rotation back. - Conor McWade, MPH
- The transition was difficult in the sense that I was out of practice, but it came back quickly. I went right into my sub-internship, worked hard, and did well. I felt like it went very smoothly because I was so interested in learning, and that's what everyone cared most about. I read a little bit about topics in my sub-internship (after asking for advice from the course director), and that helped serve as a warm-up to get my brain back into "medicine" mode, but I don't know how helpful it ultimately was. - Billy Sullivan, M.Ed.
- The transition went relatively smoothly. I felt like it was helpful to schedule several months of rotations in a row when I came back (I did 5 rotations back-to-back, from June to October). This allowed me to get my feet back on the ground, then dive in deep with sub-I's. By the end of those 5 months, I felt more competent clinically than I had ever felt as a clerkship student, even though I had taken the year off. - Cooper Lloyd, MPH

Other useful tips

- Try to schedule your sub-internship in May or June, not in July when the new interns are actually new interns. In July everyone, is working on trying to get the new-interns trained, etc. In June, everyone is very experienced, so you can do a lot more. - Billy Sullivan, M.Ed.
- I chose to take Step 2CK the summer before my year off, as I felt like my clinical knowledge would be the strongest at that point. I'm glad I did -- I think it relieved some stress that would otherwise have hung over me during the year off. - Cooper Lloyd, MPH

Most importantly, if you are interested in taking a year off, make sure you speak to faculty and students to get their perspectives and advice.

The Atlas: Appendix Data Survey

This section incorporates data from a survey sent out to students between June 2015 and January 2016. Please note that this data is not comprehensive, as only courses with at least three responses have been included. Some courses may have changed since the survey responses were submitted, so the survey data may not always reflect the current iteration of the course. Also, just because many students chose to pair certain longitudinal courses with a particular elective does not necessarily mean that they are the “best” pairings or that other courses may not work just as well together.

[ANES 5611 ACE: Advanced Clinical Anesthesiology](#)

[EM 5950 ACE: Emergency Medicine](#)

[IDIS 5100 ACE: Primary Care Medicine, VU](#)

[IDIS 5150 AE: Primary Care Medicine, Away](#)

[IDIS 5613 ISC: Critical Illness](#)

[IDIS 5618 ISC: Global Health](#)

[IDIS 5621 ISC: Cardiovascular Disease](#)

[IDIS 5622 ISC: The Skinny on Obesity](#)

[IDIS 5623 ISC: Addiction](#)

[IDIS 5624 ISC: Diabetes Mellitus](#)

[IDIS 5625 ISC: Immunity and Immune-compromised](#)

[IDIS 5626 ISC: Medical Imaging and Anatomy](#)

[IDIS 5627 ISC: Injury, Repair, & Rehabilitation](#)

[IDIS 600X: Research](#)

[MED 5613 ACE: Critical Care, VU](#)

[MED 5655 ACE: Geriatric Medicine](#)

[MED 5735 ACE: Palliative Care](#)

[MED 5787 ACE: Hematology-Oncology](#)

[MED 5790 ACE: Clinical Dermatology](#)

[MED 5825 ACE: Medical Ethics](#)

[PED 5830 ACE: Pediatric Emergency Medicine](#)

[RAD 5610 ACE: Diagnostic Radiology](#)

[RAD 5630 ACE: Pediatric Radiology](#)

[SURG 5610 ACE: Ophthalmology](#)

[SURG 5611 ACE: General Orthopedics](#)

[SURG 5620 ACE: Neurosurgery](#)

[SURG 5625 ACE: Otolaryngology](#)

ANES 5611 ACE: Advanced Clinical Anesthesiology

- 8 responses

Hours Worked Per Week

Less than 30	12.5%
30 - 40	37.5%
40 - 50	37.5%
50 - 60	12.5%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	87.5%
Between 7:00 and 7:59	12.5%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	12.5%
2pm to 4pm	62.5%
4pm to 6pm	25.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	87.5%
Never	12.5%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	75.0%
No	25.0%

Did this class work well with LC and FHD courses?

It worked well	100.0%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	0.0%

The majority of students reported spending ~5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: anesthesiology, EM, surgery, medicine

Class assessments were primarily: final presentation/project

Popular FHD pairings: Advanced Communications and Interprofessional Education classes

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EM 5950 ACE: Emergency Medicine

- 25 responses

Hours Worked Per Week

Less than 30	8.0%
30 - 40	24.0%
40 - 50	48.0%
50 - 60	20.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	88.0%
8am or later	12.0%

What time did you leave each day?

Noon to 2pm	18.2%
2pm to 4pm	9.1%
4pm to 6pm	54.5%
6pm to 7pm	9.1%
After 7pm	9.1%

Did you work weekends?

Every weekend	4.0%
Some weekends	96.0%
Never	0.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	52.0%
No	48.0%

Did this class work well with LC and FHD courses?

It worked well	40.0%
It was workable but not ideal	8.0%
I wouldn't recommend it	12.0%
I didn't take any LC or FHD courses with it	40.0%

The majority of students reported spending ~20 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: most everything

Class assessments were primarily: multiple choice (shelf), essay/free response (including EKGs)

Popular FHD pairings: Advanced Communications or Interprofessional Education classes

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IDIS 5100 ACE: Primary Care Medicine, VU

- 14 responses

Hours Worked Per Week

Less than 30	14.3%
30 - 40	64.3%
40 - 50	14.3%
50 - 60	7.1%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	7.1%
Between 7:00 and 7:59	35.7%
8am or later	57.1%

What time did you leave each day?

Noon to 2pm	7.1%
2pm to 4pm	0.0%
4pm to 6pm	92.9%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	7.1%
Never	92.9%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	100.0%
No	0.0%

Did this class work well with LC and FHD courses?

It worked well	92.3%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	7.7%

The majority of students reported spending <5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: medicine, pediatrics, most anything

Class assessments were primarily: home visit reflection

Popular FHD pairings: Advanced Communications, Interprofessional Education classes

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IDIS 5150 AE: Primary Care Medicine, Away

- 6 responses

Hours Worked Per Week

Less than 30	16.7%
30 - 40	16.7%
40 - 50	66.7%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	100.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	16.7%
4pm to 6pm	66.7%
6pm to 7pm	16.7%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	50.0%
Never	50.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	83.3%
No	16.7%

Did this class work well with LC and FHD courses?

It worked well	50.0%
It was workable but not ideal	16.7%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	33.3%

The majority of students reported spending <5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: primary care, family medicine

Class assessments were primarily: home visit reflection

Popular FHD pairings: Advanced Communications

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IDIS 5613 ISC: Critical Illness

- 14 responses

Hours Worked Per Week

Less than 30	7.1%
30 - 40	57.1%
40 - 50	28.6%
50 - 60	7.1%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	35.7%
8am or later	64.3%

What time did you leave each day?

Noon to 2pm	21.4%
2pm to 4pm	57.1%
4pm to 6pm	21.4%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	100.0%
Never	0.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	71.4%
No	28.6%

Did this class work well with LC and FHD courses?

It worked well	69.2%
It was workable but not ideal	30.8%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	0.0%

The majority of students reported spending 15-20 hours/week in didactics

Students felt this class was helpful for: most anything

Class assessments were primarily: multiple choice

Popular FHD pairings: Advanced Communications, Interprofessional Education classes

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IDIS 5618 ISC: Global Health

- 4 responses

Hours Worked Per Week

Less than 30	25.0%
30 - 40	25.0%
40 - 50	50.0%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	25.0%
Between 7:00 and 7:59	25.0%
8am or later	50.0%

What time did you leave each day?

Noon to 2pm	25.0%
2pm to 4pm	75.0%
4pm to 6pm	0.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	25.0%
Never	75.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	33.3%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	66.7%

The majority of students reported spending <5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: most anything

Class assessments were primarily: Final presentation

Popular FHD pairings: Most didn't take an FHD course

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IDIS 5621 ISC: Cardiovascular Disease

- 9 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	88.9%
40 - 50	11.1%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	11.1%
Between 7:00 and 7:59	88.9%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	88.9%
4pm to 6pm	11.1%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	88.9%
No	11.1%

Did this class work well with LC and FHD courses?

It worked well	77.8%
It was workable but not ideal	11.1%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	11.1%

The majority of students reported spending 5-10 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: Medicine, surgery, anesthesiology

Class assessments were primarily: Final presentation/project

Popular FHD pairings: Advanced Communications

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IDIS 5622 ISC: The Skinny on Obesity

- 3 responses

Hours Worked Per Week

Less than 30	100.0%
30 - 40	0.0%
40 - 50	0.0%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	100.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	100.0%
2pm to 4pm	0.0%
4pm to 6pm	0.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	66.7%
No	33.3%

Did this class work well with LC and FHD courses?

It worked well	33.3%
It was workable but not ideal	33.3%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	33.3%

The majority of students reported spending 5-10 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: primary care specialties

Class assessments were primarily: Essay/free response, final presentation/project

IDIS 5623 ISC: Addiction

- 3 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	0.0%
40 - 50	100.0%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	0.0%
8am or later	100.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	100.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	66.7%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	33.3%

The majority of students reported spending 15-20 hours/week in didactics

Students felt this class was helpful for: Psychiatry, Primary Care, EM, OB/GYN, Surgery, Anesthesia

Class assessments were primarily: Mostly multiple choice

Popular FHD pairings: Advanced Communications, Interprofessional Education classes

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IDIS 5624 ISC: Diabetes Mellitus

- 4 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	25.0%
40 - 50	50.0%
50 - 60	25.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	25.0%
Between 7:00 and 7:59	50.0%
8am or later	25.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	25.0%
4pm to 6pm	75.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	100.0%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	0.0%

The majority of students reported spending 5-10 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: anything, medicine

Class assessments were primarily: Multiple choice, final project/presentation

Popular FHD pairings: Advanced Communications, Interprofessional Education classes

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IDIS 5625 ISC: Immunity and Immune-compromised

- 6 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	33.3%
40 - 50	16.7%
50 - 60	50.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	16.7%
Between 6:00 and 6:59	33.3%
Between 7:00 and 7:59	50.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	16.7%
2pm to 4pm	16.7%
4pm to 6pm	66.7%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	33.3%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	66.7%

The majority of students reported spending 10-15 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: Infectious Disease, Transplant

Class assessments were primarily: Multiple choice, essay/free response, final presentation/project

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IDIS 5626 ISC: Medical Imaging and Anatomy

- 8 responses

Hours Worked Per Week

Less than 30	25.0%
30 - 40	25.0%
40 - 50	37.5%
50 - 60	12.5%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	37.5%
8am or later	62.5%

What time did you leave each day?

Noon to 2pm	14.3%
2pm to 4pm	57.1%
4pm to 6pm	28.6%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	75.0%
No	25.0%

Did this class work well with LC and FHD courses?

It worked well	25.0%
It was workable but not ideal	37.5%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	37.5%

The majority of students reported spending ~20 hours/week in didactics Students felt this class was helpful for: anything, radiology

Class assessments were primarily: Multiple choice, essay, final presentation/project, practical exam

Popular FHD pairings: Interprofessional Education classes

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IDIS 5627 ISC: Injury, Repair, & Rehabilitation

- 5 responses

Hours Worked Per Week

Less than 30	20.0%
30 - 40	0.0%
40 - 50	0.0%
50 - 60	20.0%
60 - 70	20.0%
70+	40.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	60.0%
Between 6:00 and 6:59	40.0%
Between 7:00 and 7:59	0.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	60.0%
6pm to 7pm	40.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	100.0%
Never	0.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	20.0%
It was workable but not ideal	80.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	0.0%

The majority of students reported spending ~20 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: Anything, EM, surgery, Critical care

Class assessments were primarily: Multiple choice, final presentation/project, practical exam

Popular FHD pairings: Advanced Communications classes

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IDIS 600X: Research (All areas combined)

- 60 responses

Hours Worked Per Week

Less than 30	26.7%
30 - 40	31.7%
40 - 50	21.7%
50 - 60	15.0%
60 - 70	3.3%
70+	1.7%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	1.7%
Between 7:00 and 7:59	33.3%
8am or later	65.0%

What time did you leave each day?

Noon to 2pm	10.2%
2pm to 4pm	16.9%
4pm to 6pm	59.3%
6pm to 7pm	10.2%
After 7pm	3.4%

Did you work weekends?

Every weekend	1.7%
Some weekends	46.7%
Never	51.7%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	98.3%
No	1.7%

Did this class work well with LC and FHD courses?

It worked well	87.9%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	12.1%

The majority of students reported spending <5 hours/week in didactics (classroom lectures, etc)

Class assessments were primarily: Final presentation/project, journal entries

Popular FHD pairings: QIPS, Advanced Population Health

MED 5613 ACE: Critical Care, VU

- 3 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	0.0%
40 - 50	0.0%
50 - 60	33.3%
60 - 70	33.3%
70+	33.3%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	100.0%
Between 7:00 and 7:59	0.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	33.3%
6pm to 7pm	33.3%
After 7pm	33.3%

Did you work weekends?

Every weekend	100.0%
Some weekends	0.0%
Never	0.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	0.0%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	100.0%

The majority of students reported spending <5 hours/week in didactics
Students felt this class was helpful for: EM, medicine

MED 5655 ACE: Geriatric Medicine

- 3 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	66.7%
40 - 50	33.3%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	50.0%
8am or later	50.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	100.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	100.0%
No	0.0%

Did this class work well with LC and FHD courses?

It worked well	66.7%
It was workable but not ideal	33.3%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	0.0%

The majority of students reported spending ~5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: Primary care, medicine

Class assessments were primarily: no assessments

MED 5735 ACE: Palliative Care

- 6 responses

Hours Worked Per Week

Less than 30	16.7%
30 - 40	66.7%
40 - 50	16.7%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	83.3%
8am or later	16.7%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	50.0%
4pm to 6pm	50.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	100.0%
No	0.0%

Did this class work well with LC and FHD courses?

It worked well	83.3%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	16.7%

The majority of students reported spending <5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: most anything, medicine, critical care

Class assessments were primarily: reflections

Popular FHD pairings: Advanced Communications

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MED 5785 ACE: Hematology-Oncology

- 4 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	0.0%
40 - 50	25.0%
50 - 60	0.0%
60 - 70	50.0%
70+	25.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	100.0%
Between 7:00 and 7:59	0.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	50.0%
6pm to 7pm	25.0%
After 7pm	25.0%

Did you work weekends?

Every weekend	25.0%
Some weekends	75.0%
Never	0.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	25.0%
It was workable but not ideal	25.0%
I wouldn't recommend it	25.0%
I didn't take any LC or FHD courses with it	25.0%

The majority of students reported spending <5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: Medicine

Class assessments were primarily: final presentation/project

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MED 5790 ACE: Clinical Dermatology

- 6 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	66.7%
40 - 50	33.3%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	83.3%
8am or later	16.7%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	100.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	83.3%
No	16.7%

Did this class work well with LC and FHD courses?

It worked well	66.7%
It was workable but not ideal	16.7%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	16.7%

The majority of students reported spending ~5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: Medicine, pediatrics, EM, dermatology

Class assessments were primarily: Final presentation/project

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MED 5825 ACE: Medical Ethics

- 4 responses

Hours Worked Per Week

Less than 30	25.0%
30 - 40	50.0%
40 - 50	25.0%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	0.0%
8am or later	100.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	100.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	100.0%
No	0.0%

Did this class work well with LC and FHD courses?

It worked well	75.0%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	25.0%

The majority of students reported spending 5-10 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: Medicine, Pediatrics, Psychiatry

Class assessments were primarily: Essays

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PED 5830 ACE: Pediatric Emergency Medicine

- 4 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	100.0%
40 - 50	0.0%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	0.0%
8am or later	100.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	0.0%
6pm to 7pm	0.0%
After 7pm	100.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	100.0%
Never	0.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	100.0%
No	0.0%

Did this class work well with LC and FHD courses?

It worked well	50.0%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	50.0%

Students felt this class was helpful for: EM, Pediatrics

RAD 5610 ACE: Diagnostic Radiology

- 8 responses

Hours Worked Per Week

Less than 30	12.5%
30 - 40	75.0%
40 - 50	12.5%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	50.0%
8am or later	50.0%

What time did you leave each day?

Noon to 2pm	12.5%
2pm to 4pm	62.5%
4pm to 6pm	25.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	100.0%
No	0.0%

Did this class work well with LC and FHD courses?

It worked well	87.5%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	12.5%

The majority of students reported spending ~5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: anything, ortho

Class assessments were primarily: Multiple choice

Popular FHD pairings: QIPS, Advanced Communications classes

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RAD 5630 ACE: Pediatric Radiology

- 4 responses

Hours Worked Per Week

Less than 30	50.0%
30 - 40	50.0%
40 - 50	0.0%
50 - 60	0.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	0.0%
8am or later	100.0%

What time did you leave each day?

Noon to 2pm	100.0%
2pm to 4pm	0.0%
4pm to 6pm	0.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	100.0%
No	0.0%

Did this class work well with LC and FHD courses?

It worked well	75.0%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	25.0%

Students felt this class was helpful for: Radiology, pediatrics, surgery

SURG 5610 ACE: Ophthalmology

- 5 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	20.0%
40 - 50	20.0%
50 - 60	60.0%
60 - 70	0.0%
70+	0.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	0.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	80.0%
Between 7:00 and 7:59	20.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	100.0%
6pm to 7pm	0.0%
After 7pm	0.0%

Did you work weekends?

Every weekend	0.0%
Some weekends	0.0%
Never	100.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	80.0%
No	20.0%

Did this class work well with LC and FHD courses?

It worked well	60.0%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	40.0%

The majority of students reported spending 5-10 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: Ophtho, EM, neurosurgery, plastics, ENT

SURG 5611 ACE: General Orthopedics

- 4 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	0.0%
40 - 50	0.0%
50 - 60	0.0%
60 - 70	25.0%
70+	75.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	100.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	0.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	25.0%
6pm to 7pm	50.0%
After 7pm	25.0%

Did you work weekends?

Every weekend	75.0%
Some weekends	25.0%
Never	0.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	0.0%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	100.0%

The majority of students reported spending ~5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: Ortho, surgery, EM

SURG 5620 ACE: Neurosurgery

- 4 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	0.0%
40 - 50	0.0%
50 - 60	0.0%
60 - 70	0.0%
70+	100.0%

What time did you get in each morning?

Before 4am	25.0%
Between 4:00 and 4:59	75.0%
Between 5:00 and 5:59	0.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	0.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	0.0%
6pm to 7pm	75.0%
After 7pm	25.0%

Did you work weekends?

Every weekend	75.0%
Some weekends	25.0%
Never	0.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	0.0%
It was workable but not ideal	0.0%
I wouldn't recommend it	0.0%
I didn't take any LC or FHD courses with it	100.0%

Students felt this class was helpful for: neurosurgery

SURG 5625 ACE: Otolaryngology

- 4 responses

Hours Worked Per Week

Less than 30	0.0%
30 - 40	0.0%
40 - 50	0.0%
50 - 60	20.0%
60 - 70	20.0%
70+	60.0%

What time did you get in each morning?

Before 4am	0.0%
Between 4:00 and 4:59	60.0%
Between 5:00 and 5:59	40.0%
Between 6:00 and 6:59	0.0%
Between 7:00 and 7:59	0.0%
8am or later	0.0%

What time did you leave each day?

Noon to 2pm	0.0%
2pm to 4pm	0.0%
4pm to 6pm	40.0%
6pm to 7pm	40.0%
After 7pm	20.0%

Did you work weekends?

Every weekend	20.0%
Some weekends	80.0%
Never	0.0%

Is this the type of course where you had the flexibility to do something else at the same time (work on a paper, etc)?

Yes	0.0%
No	100.0%

Did this class work well with LC and FHD courses?

It worked well	20.0%
It was workable but not ideal	20.0%
I wouldn't recommend it	20.0%
I didn't take any LC or FHD courses with it	40.0%

The majority of students reported spending <5 hours/week in didactics (classroom lectures, etc)

Students felt this class was helpful for: ENT