Immersion Phase
Class of 2021
Careers in Medicine Fair
"By failing to prepare, you are preparing to fail."
-Benjamin Franklin

"Poor planning on your part does not necessitate an emergency on mine."
- Bob Carter
What we’ll cover tonight:

• Immersion Phase requirement reminders
• Student representative tips on Immersion Phase planning
• Integrated Science Course (ISC) introductions
• Meeting with College Mentors (15 min: 2nd floor)
  – MSTP Students will meet with Dean Fleming
• Meeting meet with subspecialty advisors (30 min: 2nd floor)
**Curriculum 2.0: Immersion Phase**

A highly individualized post-clerkship phase that uses clinical context to build upon prior learning.

### Immersion Phase Goals

- Deepen **FOUNDATIONAL SCIENCE KNOWLEDGE** during meaningful clinical engagement
- Solidify **CLINICAL SKILLS**
- Enhance **PRACTICE-BASED LEARNING SKILLS**
- Ensure readiness for **INTERN ROLE/RESIDENCY**
- Expand knowledge and skills regarding **SCHOLARSHIP**
- Further grow knowledge and skills regarding **LEADERSHIP**
- Encourage **PROFESSIONAL DEVELOPMENT**
# C 2.0 Immersion Phase (IP) Requirements

## Minimum C2.0 Requirements (in Months)

<table>
<thead>
<tr>
<th>On-Campus</th>
<th>4</th>
<th>Integrated Science Courses (ISCs)</th>
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<tbody>
<tr>
<td></td>
<td>1</td>
<td>Acting Internship (AI)</td>
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<tr>
<td></td>
<td>4</td>
<td>Advanced Clinical Electives (ACEs)</td>
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<tr>
<td>On-Campus or Away (away with approval)</td>
<td>3</td>
<td>Research Immersion</td>
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<tr>
<td></td>
<td>3</td>
<td>Competency and Interest-Driven Rotations* (can be ISCs, ACEs, AIs or Electives)</td>
</tr>
</tbody>
</table>

15 required months

- Must include:
  - 1 Primary Care course (either ACE or ISC)
  - 1 Acute Care course (EM or ICU-based course)

4+2+1 (7 total) *Flex months (4 + 2 month for Step 1 + 1 month for interviews)*

*Students can register for up to 19 months

*At least one must be clinical rotation.*
Approach to IP Planning

• Ideally, plan for 3 ISCs in Year 3 with a minimum of 2

• Acting Internships (AI) will be taken between March of Y3 and September of Y4 by most students
  – Students will work with IP team to register

• QI must be completed by November of Year 4
Approach to IP Planning

• Have several schedules planned and recognize that you will make many changes to your schedule
• Be mindful of your peers as you plan
• Discuss your IP Plan with your advisors, mentors, coach:
  – Year 3 should be approached as exploratory and to attain required competencies
  – Balance general medical education vs specialization
Learning Communities

Registration needed in YES for all 8 LC units

- 8 units
  - Mondays from 1-3 (odd units) and 3-5 pm (even units)
  - **Face-to-face meeting: 3rd Monday**

- Months offered:
  - Sept & Jan: Units 1 & 2
  - Oct & Feb: Units 3 & 4
  - Nov & March: Units 5 & 6
  - Dec & April: Units 7 & 8

- Pass/fail
Inquiry Program in the IP

Inquiry Program Overview

Year 1
- Orientation
- Foundations of Physical Diagnosis (PD)
- Learning Communities/Research (LCR)
- Human Blueprint & Architecture
- Microbes & Immunity
- Neurosciences & Neurobiology
- Endocrine, Digestion & Reproduction
- Brain, Behavior & Movement

Year 2
- Break
- Orientation/Diagnosis intro
- Obstetrics/Gyn / Electives
- Obstetrics/Gyn / Electives
- Obstetrics/Gyn / Electives

Year 3
- Fixed Step 1 Period
- PLAN - Sept.
- Immersion
- PLAN - Sept.
- Immersion

Year 4
- PLAN - March
- Immersion
- Elective
- PLAN - Sept.
- Immersion

C.A.S.E.

Discovery

Year Outs

Fixed Step 1 Period

- Immersion
- PLAN - Sept.
- Immersion
- PLAN - Sept.
- Immersion
- Elective
FHD Immersion Course Information

• 5 units taken during Immersion Weeks
  – You don’t register for these
  – **Attendance is mandatory**

• 5 units longitudinally, mostly during 3\textsuperscript{rd} year
  – Paired with a primary rotation
  – Cannot take FHD when you take PLAN
  – Tuesdays from 1-5 pm
  – **One or two face-to-face meetings (varies by course)**

https://medschool.vanderbilt.edu/fhd/foundations-of-health-care-delivery-immersion-phase/
Advanced Communications 1 and Public Health and Prevention (Intro to Immersion Phase week)

Advanced Communications 2 and Interprofessional Education 1 (3rd year spring FHD Immersion)

Healthcare Economics and Policy (4th year winter FHD Immersion)

QI 1-3/PS longitudinally during 3rd year IPE2 fulfilled either via one month longitudinal or other approved experience*

*Such as Nicaragua, Shade Tree, VPIL, or other approved interprofessional experience
VMS2 Registration Timeline

**March**
- 3/27: Careers in Medicine ISC Fair March 27 at 5 pm EBL 238
- 4/4: Rising VMS3 IP Requirements Meeting
- 4/8: How-to Register Meeting April 4 at 5 pm EBL 238

**April**
- 4/15: Registration opens for rising VMS4 April 15 at 6 pm
- 4/22: Registration opens for rising VMS3 April 22 at 6 pm
- 5/2: Registration reopens for ALL May 2 at midnight

**May**
- 5/2: Registration reopens for ALL May 2 at midnight

**June**

**July**

**August**
- 8/26: Immersion Phase 2019-20 begins

**September**

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You are here
Resources

• Class of 2021
  – [https://medschool.vanderbilt.edu/ume/class-of-2021-requirements/](https://medschool.vanderbilt.edu/ume/class-of-2021-requirements/)

• MD PhD Pre-C2.0
  – [https://medschool.vanderbilt.edu/ume/md-phd-requirements-pre-c-2-0/](https://medschool.vanderbilt.edu/ume/md-phd-requirements-pre-c-2-0/)

• Make sure to pick up the appropriate printed packet at the back of the room
Certificate Programs

The School of Medicine offers graduate certificate programs to its students who wish to gain focused expertise in a specific area.

- Each program has its own admission and completion requirements.
- Students **must submit an “Intent to Enroll” form** to document their intention to pursue a certificate, as well as other documentation as needed.
- Permission of the degree program director and the certificate program director are required to pursue a certificate.
Certificate Programs

- Biomedical Ethics
- Global Health
- Lesbian, Gay, Bisexual, and Transgender (LGBT) Health
- Neurodevelopmental Disabilities
Careers in Medicine

https://medschool.vanderbilt.edu/cim/pathway-to-match/

*Your guide to succeeding in the residency application process with info such as*

- Cost of Applying
- Fourth-Year Scheduling
- Away Rotations
- Calendar to Match
- Faculty Advisor Lists
- Checklist for Match
- Workshops
- Application Process
- Letters of Recommendation
Integrated Science Course Presentations

(please hold all questions until the end)
Cardiovascular Disease
David Meoli, MD, Steven Eskind, MD, Lisa Mendes, MD, Julie Damp, MD, Ash Shah, MD, Robert Deegan, MD

Science: Lecture, Anatomy Lab, CELA (code and echo simulators), ECG workshops, CBL
- CV gross anatomy and imaging
- Pathophysiology of atherosclerosis
- CV hemodynamics (normal, HF)
- Acute and chronic CHF treatment
- Vascular emergencies
- Pharmacology (anti-thrombotic, HF, anesthetic)
- Echo: US physics, fluid dynamics
- Vascular biology of stress testing
- ECG interpretation
- Pulmonary vascular disease
- Coronary/valvular surgery

Clinical Settings: Four one week experiences
- CT Surgery
- Vascular Surgery
- CT Anesthesia
- CHF/transplant
- General Cardiology/Imaging
- Interventional Cardiology
- Electrophysiology

Specialty Interests: All are welcomed!
Internal Medicine, Cardiology, Critical Care, Surgery (CT, Vascular)
Anesthesiology, Emergency Medicine
Course Goal: To reinforce and extend students’ ability to apply immunologic concepts in a clinically-relevant manner using a range of medical subspecialties

Clinical Settings
* Inpatient and outpatient
* Clinical settings tailored to your interest
  Rheumatology; GI/Inflammatory Bowel Disease; Allergy/Immunology; Infectious Diseases; Solid Organ Transplantation; Hematopoietic Cell Transplantation

Clinical Science
Clinical Problem Solving, Immunology, Clinical Flow Cytometry and Immunologic Diagnosis, Pathologic Inflammation, Microbiology, Sepsis, Opportunistic Infections, Monoclonal Antibody Therapy, CAR T cells; Cancer Immunotherapy; Immunosuppressive Medications
“This is an essential part of the curriculum.”

“Another lesson learned from this class is how physicians can advocate for patients at different levels.”

“I will always remind myself of this fact to be kind and non-judgmental when asking about [patient’s] stories.”
Critical Illness
Jennifer King, MD, Tracy McGrane, MD & Meredith Pugh, MD

Science
- Physiology, pathophysiology, pharmacology, anatomy, microbiology, immunology, neuroscience, nutrition science, imaging, ethics and behavioral medicine

Clinical Settings
- Critical Care Skills Week (CELA) – central lines, airway, chest tubes, resuscitation training
- One week in an ICU (medical, surgical, burn, neurologic, cardiovascular, or pediatric)

Specialty Interests
- Anesthesiology, Critical Care Medicine, Internal Medicine and its Subspecialties, General Surgery and its Subspecialties, Emergency Medicine, Pediatrics
Diabetes
Michael Fowler, MD

Conceptual Framework

Quality Improvement
Longitudinal Scientific Project
Foundational Science Presentation
Harrison’s Diabetes

Integrated Science Courses

Multiple Disciplines

Glucose Management Service
Outpatient Clinic
Patient education
MINIMAL OBSERVATIONAL LEARNING
MAXIMUM “DOING”

“Classroom” Based

“Classroom” Based

Learning objectives aimed at building standardized scaffolds, based on the ideal and the idealized

Structured, predictable
Formal, prescribed
Protected time
“How do I build enduring conceptual scaffolds?”

Advanced Non-clinical Electives

Single Discipline

Workplace Based

Advanced Clinical Experiences

Learning objectives are idiosyncratic, personalized, based on the real and pragmatic

Complex, unpredictable
Informal, responsive
Opportunistic
“How do I convert experience into deep learning?”

Acting Internships/Sub-Is

MINIMAL OBSERVATIONAL LEARNING
MAXIMUM “DOING”
Emergency Care
Kendra Parekh, MD, and Saralyn Williams, MD

Designed for students with interests in: anesthesia, critical care, EM, family medicine, IM, neurology, orthopedics, pediatrics, psychiatry, radiology, surgery and surgical subspecialties
Global Health
Doug Heimburger, MD, MS
Marie Martin, PhD, MEd
Ed Trevathan, MD, MP

**Sciences:**
Health systems, population health, pathology and pathophysiology (IDs & NCDs), epidemiology, nutrition, public health

**Clinical settings:**
Multiple international sites in low-resourced settings, including Jordan, Kenya, and Latin America; other locations available upon request

**Specialty interests:**
Primary care, family medicine, ICU, IDs, internal medicine, Ob/Gyn, ophthalmology, pediatrics, psychiatry, surgery, urology, and others.
Healthy Aging & Quality Dying
Mariu Duggan, MD, MPH & Andy Wooldridge, MD

Science
Physiology, biochemistry, immunology, pharmacology, neuroscience, psychology, epidemiology, preventive health, public health, social sciences, philosophy, ethics, science of healthcare systems

Clinical Settings
Skills week
1 week inpatient (geriatrics wards/consults, geri-psych, nursing home)
1 week outpatient (primary care, specialty clinics)
Home, assisted living, nursing home, palliative care, hospice visits, V3

Specialty Interests
Internal Medicine and subspecialties, Surgery, Family Medicine, Neurology, Psychiatry, Emergency Medicine
Infectious Diseases

Holly Algood, PhD, Christina Fiske, MD MPH
Cody Chastain MD, Isaac Thomsen MD MPH

Science
Virology, microbiology, molecular biology, immunology, pathophysiology, pathology, antimicrobial stewardship, infection prevention

Clinical Settings
Inpatient consult service (Pediatric or Adult), outpatient clinics (Pediatric, General Adult, HIV), microbiology and virology lab

Specialty Interests
Internal Medicine and Pediatrics, (esp. Allergy/Immunology, Rheumatology, Hematology/Oncology, Infectious Diseases, and Transplant subspecialties), Dermatology, Pathology
Injury, Repair & Rehabilitation (IRR)
Shannon Eastham, MD

Science
Anatomy, Cell and Developmental Biology, Epidemiology, Ethics, Immunology, Implementation Science, Neuroscience, Nutrition sciences, Pathology, Pathophysiology, Pharmacology, Radiology, Social Sciences, Speech Sciences, and System Sciences

Clinical Settings
Trauma (ICU/Admits): 2 Nights and 2 Days
Wound Team: 0.5 Day
Medical Examiner’s (Coroner’s) Office: 2 Days
Stallworth Rehabilitation Hospital: 0.5 Day

Specialty Interests
Surgery & Subspecialties, Emergency Medicine, Anesthesiology, and Aspiring MDs
Medical Imaging & Anatomy
Will Laxton, MD and Scott Pearson, MD

Science

Anatomy labs*, radiation basics, contrast use, appropriate ordering

Clinical Settings

See MRI in action & procedures in fluoroscopy; Hands-on Ultrasound in CELA: SP & image-guided CVC placement; Practice being a Radiology resident; Radiology reading room experience*

Specialty Interests

*Individualized based on your interest:
Internal Medicine, General Surgery, Emergency Medicine, Orthopedic Surgery, Pediatrics, Neurology, Neurosurgery, Ophthalmology, Ob-Gyn, ENT, Radiology, Radiation Oncology
Embryology and development, Anatomy, Neurophysiology, Sexual function and response, Sexual orientation, Intimacy and behavior, Treatment of sexual dysfunction, Sexually transmitted infections, Infertility

Special emphasis is placed on interviewing techniques and skills for both adolescents and adults with a simulated patient encounter at CELA at the conclusion of the course.

Students will have hands on experience in outpatient clinics including Adolescent medicine, Urologic surgery, Planned Parenthood, Comprehensive Care Clinic, Obstetrics/Gynecology

Adolescent Medicine, Family Medicine, Internal Medicine, Obstetrics/Gynecology, Pediatrics, Psychiatry, Urology
The Skinny on Obesity
Gisella Carranza Leon, MD and C. Robb Flynn, PhD

**Highlights of the course**
- Obesity boot camp
- Food analysis project
- Morning at the Dayani Center

**Science:**
- Adipose tissue physiology
- Gut regulation of metabolism
- Nutrition
- Pathophysiology, pharmacology, diagnosis and treatment of obesity and its complications.

**Clinical Settings**
- Medical Weight Loss Clinic
- Surgical Weight Loss
- Vanderbilt Lipid Clinic
- Diabetes Eskind Clinic

**Specialty Interests**
All specialties must deal with patients with obesity, but critical for Internal Medicine and subspecialties, Pediatrics and subspecialties, Surgery (all types), Neurology, Ob/Gyn
Science

Health systems science, clinical & behavioral medicine, population & public health, health policy, socio-ecologic determinants of health, communication science, leadership & organizational management, implementation science

Clinical Settings

- Immersive experience in which interprofessional group of students and faculty provide comprehensive clinical care & care navigation to panel of patients
- Professions include Medicine, Nursing, Social Work, Pharmacy, Physician Assistant
- Can choose to do one-, two- or three-month experience:
  - Month 1: ISC in health systems science
  - Month 2: ACE in population health
  - Month 3: ACE in panel-based care
- Students who complete 3-month experience eligible for QI Advanced Track credit
- Meets primary care requirement

Specialty Interests

Primary Care, Internal Medicine, Family Medicine, Population/Public Health Medicine
# ISC Offerings in 2019-20

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<thead>
<tr>
<th>Course</th>
<th>Max Enrollment per offering</th>
<th>Academic Year 2019-20</th>
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<tr>
<td>Cardiovascular Diseases</td>
<td>8</td>
<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Cancer</td>
<td>12</td>
<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Community Healthcare</td>
<td>8</td>
<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Critical Illness</td>
<td>24</td>
<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Diabetes</td>
<td>4</td>
<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Global Health</td>
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<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Clinically Applied Immunology</td>
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<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Injury, Repair, &amp; Rehabilitation</td>
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<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Medical Imaging and Anatomy</td>
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<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Obesity</td>
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<tr>
<td>Infectious Diseases</td>
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<tr>
<td>Sexual Med</td>
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<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Healthy Aging and Quality Dying</td>
<td>8</td>
<td>7 8 9 10 11 12 1 2 3 4 5 6</td>
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<tr>
<td>Emergency Care</td>
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<tr>
<td>Working Learning Health System</td>
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