

### Supplemental Materials 3. Equity and Justice Longitudinal Anti-Racism Curriculum

Phase	Course	Description of Curricular Activity	Modes of Assessment
Ready 4 VP&S	Pre-Orientation Summer Reading Curriculum	<u>Just Medicine</u> chapters 2&5 by Matthew <sup>1</sup> , <u>Fatal Invention</u> , chapters 1,2 &6, by Roberts <sup>2</sup> ; <u>Medical Apartheid</u> , chapter 7 by Washington <sup>3</sup> ; and “The Fire Next Time” by Baldwin <sup>4</sup>	Discussion participation in the sociobehavioral medicine course: Foundations of Clinical Medicine (FCM)
	Orientation	Four community orientation sessions: service-learning lecture, community history lecture, community leader panel, and asset mapping walking tour	Walking tour teams of 4 students present a 5 minute powerpoint presentation within FCM seminars
		Lecture: History of racism in medicine: includes local VP&S history (e.g., slaveholder faculty leaders)	None
Fundamentals	Biomolecular and Cellular Mechanisms	None	N/A
	Foundations of Clinical Medicine (FCM): 3-semester sociobehavioral medicine course	Simulation: Communication skills practice Lectures and Workshop: Working with Interpreters, culturally competent communication Lectures, small group seminars: Structural racism; health equity; bias in research; implicit bias, health disparities, SDOH, interpreter use, cross-cultural communication, structural competency, advocacy	Written assignments: SDOH; advocacy op-ed; multiple perspectives Implicit association test Written narrative medicine-based reflection (required but not graded) <sup>5</sup> Seminar discussion participation Live feedback from in-person interpreter volunteers
	Foundations of Clinical Medicine Tutorials (FCMT)	3-hour workshop: Trauma Informed Care interview and physical exam skills 2- hour workshop: Anti-Racism at the Bedside <sup>6</sup> content includes practice recognizing and avoiding bias within clinical notes, SDOH, clinical exam findings on skin of color	Seminar discussion participation Note-writing assignment: re-write a biased note with non-stigmatizing language.
	Genetics	2 Lectures, 1 small group discussion: Definitions of race, ancestry, ethnicity; bias in population screening and ancestry search tools, ethics; health disparities	Multiple choice questions (MCQ)
	Anatomy	2 Lectures: Intersex variation, melanin-related gingival mucosa appearance, historical Black pioneer: Viven Thomas (Tetralogy of Fallot)	None
	Histology and Pathology	None	N/A
	Data Science	Discussion, exercises, readings: Patterns of health disparities by race/ethnicity, social determinants of health, systematic causality, health equity, and policy solutions	Exam questions test students on ability to identify interaction of health, race, and other factors, understanding historical impact of systematic exclusion based on data-driven analyses
	Evidence Based Medicine	Lecture, small group discussion: Tuskegee, Nuremberg laws	None
	Immunology	None	Multiple choice question (MCQ)

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	Neurology	Lecture: Stroke Disparities, allostatic load, SDOH	MCQ
	Cardiology	Lecture: Allostatic load; SDOH, health disparities in cardiac catheterization and STEMI management	MCQ
	Pulmonology	Lecture: Issue with race-based pulmonary function testing, cystic fibrosis treatment disparity, SDOH asthma	MCQ
	Nephrology	Lecture, asynchronous self-directed learning: Race-based estimated glomerular filtration rate and alternatives, renal transplant disparities	MCQ
	Hematology	Lecture: Sickle cell disparities; euro-centric-centered hematologic laboratory values	MCQ
	Microbiology & Infectious Disease	3 Lectures: Intersection of infectious disease, carceral care and migrant care; Tuskegee Study; systemic racism in HIV care	2 essay questions
	Gastroenterology	Public Health Commute <sup>7</sup> (PHC) asynchronous multi-media module: GI and Liver Diseases: MELD score-related health disparities	Assessment of PHC completion, not competency:5% of course grade
	Endocrinology	PHC Module: Obesity bias Patient as professor presentation: Obesity bias Lecture: Gender transition medicine OSCE: Disparities in diabetes care	Assessment of PHC completion, not competency: 5% of course grade
	Rheumatology	PHC Module: Lupus disparities	Assessment of PHC completion, not competency: 5% of course grade
	Oncology	PHC Module: HPV vaccine disparity Lecture: Bone marrow registry disparities	Assessment of PHC completion, not competency:5% of course grade MCQ
	Psychiatry	Discussion group: Self-awareness of implicit bias, SDOH, psychiatric health disparities; structural competency regarding root causes of mental health disparities; advocacy strategies	None
Elective: Narrative Medicine	Race Sounds: Nicole Furlonge African American Literature	None	
MCY	R4MCY: semester-long course to prepare student to enter clinical phase of the curriculum	Lecture: Upstander skills	None
	Obstetrics and Gynecology (OB/GYN)	2-hour multi-media asynchronous education module: Carceral care for people with uterus, adverse childhood experiences, SDOH, and trauma informed care Module: Providing trauma informed care for transgender, gender-diverse, and intersex patients	Assessment of asynchronous module completion, not competency; This accounted for 2% of the final grade

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	Surgery	Lecture/discussion: Upstander skills	Discussion participation and reflective "exit ticket"
	Neurology	None	N/A
	Psychiatry	Lecture: Diversity & Disparity, educated students on the impact of race on psych diagnosis, police involvement in patient interactions, and patient cases of delays in treatment due to appropriate mistrust and decreased access to health systems	None
	Pediatrics	None	N/A
	Internal Medicine	None	N/A
	Primary Care	Seminar: students discuss structural determinants of health and how they affect the patient populations that students work with	Assignment on Structural Determinants of Health where students present on and discuss patient cases and structures that impede care End of rotation graded presentation that may cover topics related to ARDEI
	Emergency Medicine	None	N/A
	Anesthesiology	Simulation session: Intravenous line insertion practice simulation on mannequins with skin of varying complexions	None
	Urology	Lecture: PSA and racial disparities, complex interaction between genetics, racism, and SDOH in presentations and prognosis of prostate cancer Optional articles: gender affirming care in urology, prostate cancer screening disparities Optional podcast: "Fans for the Cure" podcast on PSA and prostate cancer, which touches on racial disparities	None
	Neurosurgery	None	N/A
	Orthopedic Surgery	None	N/A
	Mechanisms & Practice: week intercession for clinical students	Modules: Ethics and Upstander Skills Elective workshops: Community Empowerment in Clinical Practice, Disability Justice, Interrupting Microaggressions in Clinical Practice, Case Studies in Climate and Health, LGBTQ+ Education, Physician Advocacy, and Medical Decision Making, which touches on race bias	Self-assessment survey: upstander skills
D&I	Ready for Residency (1 month pre-graduation course)	Lectures: LGBTQIA Health and Upstander Training Online modules: notes on proper language and terminology were present throughout our asynchronous material which advised on how to use inclusive language in medical documentation	None

Phase	Course	Description of Curricular Activity	Modes of Assessment
	Electives	<p><b>Advanced Topics in Global Health</b> - This course provides an understanding of the intersections between health care delivery, policy and equity on a global scale.</p> <p><b>Human Nature: DNA, Race, and Identity</b> - Taught from the perspective of four different disciplines; Law, Religion, Science, and Medicine. The course focuses on human identity, beginning with the individual over the lifespan and progressing to communal and global viewpoints using a framework of perspectives from biology, genetics, medicine, public health, psychiatry, religion and the law.</p> <p><b>Interdisciplinary Correlation: Using the Humanities to Explore Healthcare Inequities</b> - Students reflect on selected works of art and literature as a basis to explore issues of bias and discrimination in medicine at the individual (patient, practitioner) and systematic levels, including a focus on racial disparities in healthcare. Included is an in-depth exploration of the bioethical principles of informed consent and distributive justice. Interdisciplinary guest speakers cover topics on bias in medicine from the fields of health services research, medicine, pediatrics, psychiatry, infectious diseases and Ob/Gyn, including one workshop on implicit bias and another workshop on microaggressions. Other topics covered include the historical context of race and medicine, community health research partnerships, promoting health literacy by integrating art into pediatric practice, and racial disparities in maternal and fetal outcomes.</p> <p><b>Racism and Health Elective</b> - Seminar-based four-week course. Students explore how the concepts of race and racism have and continue to impact health in the US. The relationship between racism and health is critiqued at structural, institutional, and individual levels in order to effectively evaluate and craft policies and interventions to address health disparities. Week 1: introductory history of race and racism in the US, with a focus on the biological and social constructs of race, key moments perpetuating racism in the US, and critical race theory and intersectionality. Week 2: health disparities by race across the medical specialties. Week 3: strategies being used to address health inequities, with an emphasis on health policy and specialty-specific interventions. Week 4: students are asked to draft an op-ed addressing a specific anti-racism initiative that they may implement in their specialty of choice.</p>	Varies by course
	Capstone Scholarly Project	No standard content	N/A

## Abbreviations

M1: First-year medical student

FCM I : Foundations of Clinical Medicine for First Years, a seminar series consisting of lectures and small group discussion among first year medical students

FCMT: Foundations of Clinical Medicine Tutorials, an application-based series for first year medical students to practice clinical skills in preparation for major clinical year.

IAT Test: Implicit Association Test, an online quiz that measures the strength of associations between concepts (e.g. Black people, gay people) and concepts (e.g. good or bad) to determine a person's implicit, unconscious bias toward certain groups.

eGFR: Estimated Glomerular Filtration Rate, a measure of kidney function

MELD: Model for End-stage Liver Disease, a measure of liver function

OSCE: Objective Structured Clinical Examination

PHC: Public Health Commute

References

SDOH: social determinants of health

D&I: Differentiation & Integration; last three semesters at VP&S where students may take electives specific to their interests

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References

1. Matthew, DB. Just Medicine : A Cure for Racial Inequality in American Health Care, New York University Press, 2015.
2. Roberts DE. Fatal Invention : How Science, Politics, and Big Business Re-Crete Race in the Twenty-First Century. New York: The New Press; 2011.
3. Washington HA. Medical Apartheid : The Dark History of Medical Experimentation on Black Americans From Colonial Times to the Present. New York: Anchor; 2006.
4. Baldwin, J. The Fire Next Time, New York: Vintage International, 1993. This essay was first published in *The Progressive* as "A Letter to My Nephew." Baldwin later included his revised version as "My Dungeon Shook" in The Fire Next Time.
5. Cunningham, H., Taylor, D. S., Desai, U. A., Ender, K. L., Glickstein, J., Krishnan, U. S., ... & Balmer, D. F. (2021). Reading the self: medical students' experience of reflecting on their writing over time. *Academic Medicine*, 96(8), 1168-1174.
6. Tarleton, C., Tong, W., McNeill, E., Owda, A., Barron, B., & Cunningham, H. (2023). Preparing Medical Students for Anti-racism at the Bedside: Teaching Skills to Mitigate Racism and Bias in Clinical Encounters. *MedEdPORTAL: the journal of teaching and learning resources*, 19, 11333. [https://doi.org/10.15766/mep\\_2374-8265.11333](https://doi.org/10.15766/mep_2374-8265.11333)
7. The Public Health Commute. <https://www.publichealthcommute.com/gastroenterology>. Accessed March 8, 2024.