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Title of Self-Determined Major: Public Health

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2. Rationale

As a young girl growing up in Sierra Leone, I dreamt of being a doctor. The society in Sierra Leone, like the Sierra Leonean parent, is inclined to respect education in certain fields such as medicine, engineering, law and business. Growing up in a household and community like the aforementioned sets you in a direction toward an education bounded by limitations and one that inhibits curiosity, the ability to explore and discover one's passions, and hence creativity. Consequently, I grew up with a notion of education that followed a particular path. I planned to graduate high school and head on to Medical School and never considered venturing outside of those limitations for a significant portion of my academic career.

I left home for the United World College Maastricht where I was forced to challenge these ideals and limitations I had imposed on myself. I explored postcolonial literature in apartheid South Africa for my Extended Essay and was intrigued and drawn towards the issue of social injustice and race/clan relations, and how these issues manifest in the present political structure and living standards of different groups in the region. The liberal arts education at Skidmore continues to provide a means for me to continue on this path of exploration. For my freshman year Spring semester, I devised a diverse course list, spanning from *Political Philosophy* to *Slavery in American Literature* and now *Cultural Anthropology*. I engaged in class discussions that challenged the preconceived notions I had on the role of culture and politics in healthcare that proved unexpectedly enlightening when applied to the context of Sierra Leone.

I grew up hearing stories about the various tragedies that had been suffered by my loved ones including stories about my aunt, Khadija, '*wae lef pan born*' (died at childbirth) and my maternal grandfather who had passed away from pneumonia as he relentlessly refused '*wateman merecin*' (western medicine) as he called it. Although my life experience in Sierra Leone certainly exposed me to the problems that arise when there is a lack of public health infrastructure, prior to attending Skidmore, I lacked any formal knowledge on health policy and population health. As a 21-year-old, having lived a good portion of my life in Sierra Leone, it took time residing outside the country for me to reflect on my experiences, connect my experiences and classroom learning, and develop a full understanding of the incredible public health and healthcare problems faced by my home country and elsewhere in the developing world. The issues surrounding public health in Sierra Leone transcend corruption and poverty and are inclusive of the persistent class stratifications and the perceptions of *western medicine*

that originate from religio-cultural values and norms. This is not to minimize the impact of the lingering corruption and the resulting inequality in income distribution leading to the unequal access to high quality healthcare. This is to highlight other factors contributing to the malfunction of our public health infrastructures in Sierra Leone.

According to 2015 World Health Organization (WHO) data, there are 136 doctors in Sierra Leone, which is grossly inadequate for a population of 6 million. Notwithstanding the reforms and progress the Government of Sierra Leone has made since the 2002 Civil War, life expectancy at birth is 46 years (WHO, 2014), and maternal and child mortality remain among the highest in the world. The place I call home continues to combat communicable diseases whilst non-communicable diseases are being projected to increase. The monsoon seasons are characterized with cholera and flu outbreaks annually, and the recent Ebola epidemic claimed over 4,000 Sierra Leonean lives, lives of the poor, the voiceless and the marginalized. Groups of individuals, more specifically women and children, continue to be rendered vulnerable to these vicious diseases as well as harsh living conditions as a result of a lack of education in health and sanitation, and the inaccessibility of the healthcare systems in these regions. All the above mentioned factors continue to portray a need for public health professionals and for a sustainable healthcare system that is made accessible to these vulnerable populations and the nation as a whole.

After completing a two-year International Baccalaureate (IB) Diploma program at the United World College Maastricht, I became consumed with the notion of change. This idea of the changemaker is overwhelming. I became consumed with social change and social entrepreneurship but what was I changing? What is the problem in these communities? Do the individuals in these communities consider it a problem? However, as I progress through Skidmore, I find that I am interested in the issues of inequality in healthcare. It has taken me a couple years to come to realization that Medical School is not where I aspire to be, and to come to terms with the changes I have observed in my passions and interests. I have come to realize that I look forward to going back home and contributing to the restructuring of our public health infrastructure, public policy and health promotion strategies. Ultimately, I want to join the fight for a healthier Sierra Leone, and I believe a Self-Determined Public Health major will provide a foundation to pursue this goal.

Public Health is the art and science that aims to promote the health of populations through disease intervention and prevention. Public Health is interdisciplinary. It is inclusive of fields such as epidemiology, environmental science, biostatistics, mental health, health economics, health behavior and

public policy. Adequate preparation for further education in population health at the graduate level, and hence a career in public health, requires a comprehensive list of courses taken across the established departments at Skidmore such as anthropology, economics, and human physiological sciences. Because of its interdisciplinary nature, the opportunity to study public health is not something that can be achieved through a single major or even a double major within the existing Skidmore departments. I intend to pursue a graduate degree in Global Epidemiology and International Development. Whilst Skidmore offers a portion of the courses required to pursue this field, I will have to take courses abroad or outside of Skidmore to complete the breadth requirements for graduate study, and ultimately a career in Public Health.

A self-determined major can be intimidating and is one of the reasons I had waited this long to get on the track. I initially found the idea of deviating from an already-existing structure to be overwhelming and confusing, but since I strongly believe that this is the ideal path for me, I am fully committed to pursuing an SDM and following my passion. A self-determined major provides a space in which I can fully express myself and create. I welcome this invigorating challenge presented by the SDM; that of being in control of my academic career here at Skidmore College. A self-determined Public Health major provides a medium through which I can tailor my academic career at Skidmore to incorporate my interests and aspirations and an opportunity to design an independent study as a culmination of my work and manifestation of the liberal arts education I will have experienced at Skidmore.

3. Public Health Major Core Courses

3.1 Foundation

Course Number	Department	Title of Course/Credits
EX 131	Health and Human Physiological Sciences	Intro to Public Health (3)
AN 101	Anthropology	Intro to Cultural Anthropology (3)
HF 215	Honors Forum	Peer Health Education (3)

3.2 Methodology

Course Number	Department	Title of Course/Credits
BI 235	Biology	Biostatistics (4)
IEHC2004	Study Abroad	Health Demography (4)
SO 227	Sociology	Social Research Methods (3)
HF 315	Honors Forum	Advanced Peer Health Education (3)

3.3 Theory

Course Number	Department	Title of Course/Credits
CIHD3004	Study Abroad	Global Communicable and Noncommunicable Diseases (4)
IEHC2006	Study Abroad	Health and Behavior (3)
IEHC3003	Study Abroad	Genomics, Health & Society (4)
AN 349	Anthropology	Medical Anthropology (4)

3.4 Capstone

Course Number	Department	Title of Course/Credits
ID 351 A	Interdisciplinary Studies	SDM Prep Seminar (1)
ID 371	Interdisciplinary Studies	Interdisciplinary Independent Study (4)

4. Breadth Requirements

Title of Course / Credits	Departments
HP 131 Introduction to Public Health (3)	Health and Human Physiological Sciences
BI 235 Biostatistics (4)	Biology
AN 349 Medical Anthropology (4)	Anthropology
IECH3004 Genomics, Health and Society (4)	UCL (Population Health)
CIHD3004 Global Communicable and Noncommunicable Diseases (4)	UCL (Global Health)

5. Depth Requirements

HP 131 Introduction to Public Health → HF 215 Peer Health Education → HF 315 Advanced Peer Health Education

AN 101 Introduction to Cultural Anthropology → AN 349 Medical Anthropology

IEHC2006 Health and Behavior → IEHC3004 Genomics Health and Society

6. Proposed Electives

Course Number	Department	Title of Course/Credits
BI 239	Biology	Parasitology, Epidemiology and Public Health (4)
AN 343	Anthropology	Ritual and Religion (3)
EC 283	Economics	Economics of Health and Healthcare (3)
AN 344	Anthropology	Anthropology and Environmental Health (4)

7. Academic Semester Outline

Academic Year	Fall Semester	Spring Semester
First Year (2016-2017)	• CH 115 Fundamentals of Chemistry • EN 103 Writing Seminar I • SSP 040 Law, Religion & Society • BI 105 Introductory Biology 16 Credits	• CH 125 Principles of Chemistry • EC 103 Intro to Macroeconomics • AN 102 Anthropology of Human Past • EN 105 Aftermath of Slavery in American Literature • PL 102 Intro to Political Philosophy 18 Credits
Second Year (2017-2018)	• CH 221 Organic Chemistry I • BI 107 Molecular Cell Foundations of Life • AN 351D Human Osteology • MA 111 Calculus II 17 Credits	• CH 222 Organic Chemistry II • BI 108 Organismal Biology • EN 227 Intro to African-Am Lit • AN 101 Intro to Cultural Anthropology • CH 171 Intro to Chemical Research 16 credits

Academic Year	Fall Semester	Spring Semester
Third Year (2018-2019)	• AN 349 Medical Anthropology • HP 131 Intro to Public Health • WLF 102 Elementary French II • EC 104 Intro to Microeconomics • HF 215 Peer Health Education 17 Credits	• IEHC2004 Health Demography • IEHC2006 Health and Behavior • IEHC3003 Genomics, Health and Society • CIHD3004 Global Communicable and Noncommunicable Diseases 16 Credits
Fourth Year (2019-2020)	• EC 235 Macroeconomic Theory • SO 227 Social Research Methods • ID 315A SDM Prep Seminar • BI 235 Biostatistics 13 Credits	• ID 371 Interdisciplinary Independent Study • EC 334 International Political Economy • EC 283 Economics of Healthcare • HF 315 Advanced Peer Health Education • DA 101 The Dance Experience 12 Credits

8. Catalog Description of Courses

HP 131 Introduction to Public Health

Credits: 3

Introduction to the principles and practices of public health, emphasizing the prevention of disease and promotion of health and well-being. Using a case-study framework, students will explore both the

historical and current role of public health, and will investigate basic epidemiological concepts, including study design, rates, causation, and surveillance. Environmental, behavioral, biological and socioeconomic determinants of health will be explored, and students will study both health issues that impact larger societies and those that threaten vulnerable populations.

This course explores the fundamental principles of population health: disease prevention and health promotion and will in turn prepare me for further study and research in the field of public health. This course is a foundation course because it provides an integration of the key concepts in public health in order to understand the current population health problems.

AN 101 Introduction to Cultural Anthropology

Credits: 3

An overview of concepts, theories and methods of cultural anthropology. Students can learn about central anthropological ways, such as kinship, gender, class, race, environment, ritual and religion, ethnicity, economy, and politics, and gain an understanding and appreciation for cultural differences.

This course explores cultural understanding via cultural relativism which will help facilitate fieldwork and research within communities that are defined by cultural activity that is different from my experiences and background. AN 101 provides a foundational understanding of the role culture plays in health systems.

HF 215 Peer Health Education

Credits: 3

An introduction to the concepts, principles, theory, and practice of health education, health promotion and peer-based education. Students will engage with a variety of topics surrounding health, wellness, community health promotion, theories of behavioral change and leadership skill building through readings, class discussions, and opportunities for experiential learning. Throughout the semester students will research, plan, execute and evaluate educational outreach materials and programs on various health and wellness topics relevant to college-aged students.

In this course, I will gain first-hand experience together with the fundamental skills in community outreach, health education and health promotion, all of which are transferable to the field in a career in public health in any locale. It is a foundation course as explores the basic concepts in health promotion and outreach required for advanced learning and application in Public Health.

BI 235 Biostatistics

Credits: 4

Quantitative and statistical skills required for the study of biology and medicine. Topics include: inference, experimental design and hypothesis testing; assumptions behind statistical models and choice of statistical tests; analysis of variance and covariance; general linear models; regression and multiple regression; parametric and nonparametric tests.

Knowledge of statistical methods is integral to public health as it allows for the collection and analysis of data in characterizing magnitude and distribution of outbreaks, and health trends. Biostatistics teaches quantitative methods used to examine the relationship between variables which is an important tool in public health research.

SO 227 Social Research Methods

Credits: 3

Examination of methods employed in the investigation of sociological problems. The course analyzes the research process as an integral whole including political and ethical issues in conducting research. Topics include conceptualization, measurement approaches, design of surveys, and methods of interviewing and observation. Students design studies using various methodological issues.

In addition to quantitative methods, this course covers qualitative data and methods of collection such as surveys and interviews which are used to design and implement public health research. In addition to providing the required tools in conduction health research, this course also discusses the ethical dilemma in research.

HF 315 Advanced Peer Health Education

Credits: 1

An expansion of concepts covered in Peer Health Education by allowing students to fine tune their health promotion and peer counselling skills. Students will select specific areas of interests and will work closely with other Peer Health Educators and the instructor to plan, implement and rigorously evaluate outreach programs on campus. The course will focus on building leadership and communication skills and on deepening the expertise of the students on college health-related issues.

This course is a continuation of HF 215 and will therefore continue to provide me with the basic skills in health promotion and outreach. I will also be acquainted with the formalities of health promotion and wellness such as confidentiality and filing reports. HF 315 provides hands-on experience as a way of teaching the methodological approach to implementing health policies and solutions in respective contexts.

AN 349 Medical Anthropology

Credits: 3

A survey of the field of medical anthropology with a focus on the cross-cultural study of the body, health, disease, illness, suffering, and healing. Students examine and apply several theoretical perspectives, including biocultural, interpretive, critical, and political economic. We analyze ethnographic studies of birthing, maternal and child health, emerging diseases, death and dying, and other issues across the human life cycle in diverse geographic settings.

This course will provide me with an understanding of human health, systems of healthcare and human biocultural adaptation together with the tools necessary for analysis and evaluation of diseases, mortality and health trends within a population. Medical Anthropology teaches a theoretical approach to research in the problems facing health care and health systems of the 21st Century.

BI 239 Parasitology, Epidemiology and Public Health

Credits: 4

An exploration of the interesting central tenets of parasitology, epidemiology and public health. Students will study their commonalities to better understand the dynamics of antagonistic networks; their application to veterinary and human medicine, agriculture, and conservation; and to gain, share, and merge knowledge from different levels of biological organization (subcellular to landscapes and social networks). The course contrasts the insights, opportunities and methodologies particular to correlative studies, manipulative experiments, in-silico experiments, and meta-analyses and is grounded in an analysis of current published research.

Knowledge in parasitology and epidemiology is inherent to public health and provides the basis for the prevention of diseases and promotion of the health of populations.

AN 343 Ritual and Religion

Credits: 3

A study of religion from an anthropological perspective with a focus on ritual practices in non-Western cultural contexts. Students learn key conceptual and theoretical contributions in the anthropological study of ritual and religion, a fundamental dimension of human cultural practice the world over. Students explore religion as a way of reasoning, a form of ritual action, and an experiential reality. Topics include fetishism, symbolism, embodiment, ritual action, divination, initiation, and healing.

A study of the interaction between religion, religiosity and society is important in conducting health research, especially in countries like Sierra Leone, where the cultural practices of the people are mostly founded in religion and religious beliefs, and impact health perceptions, perceptions of health care systems and health practitioners.

EC 283 - The Economics of Health and Healthcare

Credits: 3

This course examines the issue of health and healthcare from an economic perspective. Specific issues discussed are the relationship between health and healthcare consumption; demand under conditions of uncertainty; the production and distribution of health services; the role of risk; uncertainty and insurance; and the government as insurer and provider. We will also study several of the various submarkets such as the pharmaceutical market and the market for physician services. Students will compare the United States system of healthcare provision to other systems in developed and developing world.

This course will make available the underlying skills necessary in the assessment and evaluation of the efficiency and efficacy of healthcare systems and policies, and the behavior of production and consumption of healthcare.

AN 344 Anthropology and Environmental Health

Credits: 4

An examination of health issues related to global environmental change. The course employs perspectives and theories of critical Medical Anthropology to explore the connections among broad patterns of environmental change, local responses to those changes, and relevant health concerns. Topics include the effects of population growth, urbanization, water pollution and water scarcity, epidemics,

deforestation, and species extinction in diverse geographic settings. Special attention is given to how poor and powerless social groups bear a disproportionate burden of environmental health problems.

At the end of this course I should be able to confidently assess the literature and analyze data correlating environmental degradation and the health of a population, more especially marginalized communities.

9. Description of Courses taken outside Skidmore - Skidmore in London (UCL)

IEHC2004 - Health Demography

Credits: 4

Set within the framework of the basic demographic equation (population change = births - deaths +/- net migration) the course unpacks the demographer's tool kit. We consider the derivation, use and interpretation of key measures used in the study of population structure and the components of population change (fertility, mortality and migration) concluding with a look at population projection. Throughout the course there is an emphasis on hands-on learning of demographic method with application using real data from UK and overseas. We consider how the study of demographic pattern and process relates to many of the great social policy changes of the 21st century.

Policies and solutions addressing the health and healthcare needs of a population cannot be put forward without knowledge of the population dynamics. This course explores demographic analytic methods used in deducing the denominators of health measures and evaluating the effectiveness of healthcare policies.

IEHC2006 - Health and Behavior

Credits: 4

What is behavior? What are health behaviors? How do health behaviors influence health outcomes and health inequalities? These questions are central to understanding population health. This module will introduce theories of health behavior change, including the behavior change wheel and established interventions for health promotion. Methods for examining health behavior and health behavior change over the life course will be examined. Students will examine specific behaviors individually (e.g. smoking, alcohol use, physical activity, diet, sedentary behavior) and in combination (e.g. clusters of 'preventive' and 'risky' behavior). Students will also consider how health behaviors can interact.

Implications for public health will be delineated. Finally, students will have an opportunity to critically appraise theories of health behavior with particular reference to alternative explanations such as social determinants, cognitive abilities, health literacy and the role of the built environment.

Understanding the basis of interaction between human behavior and population health will provide me with the knowledge required to evaluate health policies and healthcare systems serving particular populations. This course provides a discussion on the determinants of health-related behavior, health behavior theory and the implications of this theory in the health research and practice.

IEHC3003 - Genomics, Health and Society

Credits: 4

This module will cover the following topics:

- Basic genetics, genetic science, and concepts in epidemiology and statistics as they apply to genetics.
- Human genetics and susceptibility to disease
- Epigenetics
- Genomics and population health
- Counselling and risk communication
- Molecular epidemiology
- Big data
- Ethical, legal and social implications

This course integrates advances in human genetics and public health and allows for an improvement in the diagnosis and control of both communicable and non-communicable diseases. This course is a theoretical overview of epigenetic epidemiology, and the use of genomics and big data in public health research.

CIHD3004 - Global Communicable and Noncommunicable Diseases

Credits: 4

This module introduces students to global patterns of both communicable and noncommunicable diseases. Students will learn about the control and management of these diseases, and the political, economic and social factors that influence them. The module focuses on infectious diseases such as malaria, HIV/AIDS, tuberculosis, and neglected tropical diseases, while also reflecting the growing burden of noncommunicable diseases in both developed and developing countries. The noncommunicable diseases section will focus on illnesses such as cancer and heart diseases and the factors that underpin them. All of these debates will look at how health systems respond to these

problems, but also examine the role of factors outside of healthcare that sustain and prolong illness at both individual and population levels.

The prevention and control of diseases is at the core of public health. From Ebola, to malaria, outbreaks of infectious diseases can have devastating impacts on human life. This course is a theoretical approach to the study of the current paradigms, controversies and policies related with infectious and noncommunicable diseases.

9b. Second Option for Study Abroad - DIS Copenhagen Program

In the event I do not get into the Skidmore in London: University College London program, a second option will be the DIS-Copenhagen Study Abroad Program. Below is a list of the course description.

Health Delivery and Prioritization

Credits: 3

Different countries choose different approaches to the provision of healthcare. Through this course, you gain insight into how healthcare is organized and financed in Denmark and Northern Europe, and you investigate the impact of the social, economic, and political history on the present systems. You analyze principles of priority-setting in healthcare and discuss and assess possible solutions to challenges such as aging populations, inequality in health and rising healthcare expenditures.

Healthcare Strategies for At-Risk Populations

Credits: 3

Societies implement programs to lower health risks for vulnerable populations, but challenges arise due to external circumstances, such as legal restraints, stigmatization, or barriers involved in accessing hard to reach populations. Through Danish Case studies, you study harm reduction as a healthcare strategy for at-risk populations such as intravenous drug users, undocumented immigrants, sex workers, and homeless people not easily targeted through programs in conventional healthcare delivery.

Immunology

Credits: 3

This course gives you a fundamental understanding of the immune system, including its development, important cellular factors, modes of physiological interactions, such as that with other somatic cells and pathogens, and the processes of immune cell activation and differentiation. Clinically relevant topics such as T and B cell-mediated immunity, as well as immunology of infection and vaccine development of infection are covered.

Health Promotion and Diseases Prevention

Credits: 3

This course addresses some of the very core questions of public health science such as how to prevent people from becoming ill and how to promote good health. Through case studies of major public health challenges in Denmark, you familiarize yourself with a number of theories and methods for health promotion and prevention targeting some of the main determinants of health such as socioeconomic, structural, and individual factors.

Public Health Ethics

Credits: 3

Decision makers of health policies are increasingly dealing with ethical dilemmas. This course addresses some of these such as the protection of society from infectious disease, and modification of individual lifestyles. We study real-life cases that illustrate the tension between individual choice and societal guidelines for smoking, immunization, and application of new medical technologies.

Public Health Research Assistant Position

Credits: 3

Want to engage in research in an international setting? Spend the semester working closely with research mentor and be a part of a real research project, grasping the complexities of the research project and gaining experience that will prepare you for a research career. By the end of the semester, you will have made your own tangible contribution to the project and hone your own research skills. You will also have learned to communicate scientific ideas and findings, both orally and in writing, to members from your particular discipline as well as peers from other disciplines.

In some cases, data collected may be used as part of a project at your home university.

10. A Brief Description of Final Project

For a final project, I intend to investigate the intersection of health, culture and the socioeconomic status of a population in a region in Sierra Leone via statistical and ethnographic research methods. This investigation will focus on marginalized communities as I seek to deduce, if any, a correlation between the cultural practices, religious beliefs and financial capabilities in these communities and malnutrition, and the effect of government policies on the overall health of the population in the region.