

SAMPLE #4

Translational Molecular Biology Personal Statement

I want to design my own major in Translational Molecular Biology because of my interests in applying modern scientific discoveries to the practice of medicine. This major will integrate the fields of molecular biology, economics, and sociology. Wesleyan excels in all of these departments independently, but if I were confined to a pre-existing major, I would not be able to pursue my interests as effectively as if I were allowed to create this cross-disciplinary concentration. After graduating from Wesleyan I plan to pursue M.D. and Ph.D. degrees so that I will have the ability both to work in a research lab and actively practice medicine. My ultimate goal is to be able to directly utilize the lab research I do in a clinical setting to enhance patient care, a field known as translational medicine. I have been working with experimental cancer vaccines for the last four summers, and will continue similar research this summer during an internship at NIH in the National Cancer Institute. I am very passionate about developing novel drugs and treatments, and I would like nothing more than to be able to take them directly from the lab bench to the patient bedside. I think that this is an excellent situation to take advantage of the University Major that Wesleyan offers so that I can gain the knowledge I need in molecular biology and biochemistry to become a doctor, while developing a confident understanding of markets and insights into sociological issues regarding healthcare.

As a result, I propose the major of Translational Molecular Biology. The biological aspects of the major would help me in the development of therapeutic drugs and techniques, as well as prepare me for medical school. Biomedical

Chemistry (MB&B 321) is an example of one class that I am looking forward to taking next spring because it explores the molecular basis of disease. Last semester while I was abroad at Kings College London I took a class in pharmacology for which Wesleyan has no comparable courses, and I was fascinated by learning the rationale behind treatments for diseases from cancer to chronic heart failure. I had originally planned on majoring in MB&B and consequently have taken several in-depth classes in this department. I would like to focus my remaining two semesters at Wesleyan on Economics and Sociology so I can delve into these departments in site of completing my University Major.

The "translational" portion of my major requires an understanding of economics and marketing with specific regards to the health industry, which is why economic classes will be an important part of my major. A comprehension of markets on micro and macro levels is instilled through the completion of ECON 301 and 302, and methods for quantifying market behavior are learned in ECON 300 and 385 (Econometrics). Last year in ECON 300 I constructed a model that looked at the effects that generic drugs have on the prescription drug market for the required regression analysis project, and this year in ECON 308 (Healthcare Economics) I am writing my final paper on how health insurance affects the market for healthcare, especially prescribed drugs. I think that these two topics will serve as a great jumping off point for a senior thesis in Translational Molecular Biology in which I would examine how different aspects of pharmaceutical use in America, ranging from physiological effects of medication through marketing practices, affect patient and physician choices.

The idea of translational research, however, is not rooted solely in understanding markets quantitatively and qualitatively. In order to effectively be able to apply science to markets and consumers, I also would need to take classes in SOC and SISP. Examples of sociology classes I would take to be well versed in both aspects of translational research are Sociology of Medicine (SOC 259) and Health of Communities (SOC 315). These classes are particularly pertinent to medicine, and provide insight into why patients trust their doctors, and how patients as consumers evaluate what healthcare to purchase. These areas will help me understand the health industry from the perspective of consumers, so are quite relevant to the production and marketing of pharmaceutical and biotechnology products.

Through the Translational Molecular Biology major, I would develop a strong background in the hard sciences, but by not having to focus on one existing major, I would be afforded the flexibility to obtain a deep understanding of the principles of health economics, the pharmaceutical and biotechnology markets, and the behavior of patients as consumers. I am very passionate about this major, and actually submitted it unsuccessfully last spring. Since then I have been pursuing a major in Economics as suggested by the last committee, and have chosen my classes accordingly. However, I think that the remaining four classes (two 300 level and two 200 level) I would have to take in my final two semesters at Wesleyan would not all pertain to my interests in medicine as strongly as some other MB&B and SOC classes that I plan to take (see course list). I believe that my educational experience would be greatly enhanced if I were allowed to follow the course schedule I have

planned out and design a major that precisely reflects my academic and career interests.

I understand that one concern of any University Major may be the academic rigor and depth. However, Translational Molecular Biology requires taking the notoriously difficult classes from the ECON and MB&B departments to ensure a full and in-depth understanding to the point where I could triple major (including SISP) if I had one more semester at Wesleyan. It also consists of a handful of upper level Sociology courses that complement my understanding of the healthcare market. This University Major will enhance my academic experience by allowing me to take a range of 200 and 300 level courses from several disciplines. I am also aware that my withdrawal from BIOL 182 in the spring of my freshman year may seem alarming. This was due to the death of my grandpa with whom I was very close, and the development of an illness for which I almost took medical leave for, all at the end of the semester. After consulting with Dean Phillips, I decided that it would be better to withdraw from one class than to go home to California for the rest of the semester. I was able to complete the remainder of my classes successfully and am currently taking BIOL 182. Thank you very much for considering my application.

Courses In chronological order, list the courses that will constitute the major. At least eight courses numbered 201 or higher are required. For each course you must indicate whether it is a core or an elective. For non-Wesleyan courses, you must indicate the name and location of the school where the course will be taken. (Normally, up to three outside credits are permitted. If more are required, written approval must be obtained from the committee.)

Sem/Yr	Dept/No.	Title	Core/Elect	Transfer
Fall/Spring 08-09	MBB 181/2	Principles of Biology 1/11	Core	
Fall/Spring 08-09	MBB 191/2	Principles of Biology 1/11 Laboratory	Core	
Fall 09	MBB 208	Molecular Biology	Core	
Fall 09	Hist 254	Science in Western Culture	Elect	
Fall/Spr 09-10	Chem 251/252	Organic Chemistry 1/11	Core	
Fall/Spr 09-10	Chem 257/258	Organic Chemistry Laboratories	Core	
Spr 10	Econ 300	Quantitative Methods in Econ	Core	
Fall 10	MBB	Immune system in Health & Disease	Core	King's College London
Fall 10	MBB	Drugs and Disease A	Core	King's College London
Spr 11	Econ 301	Microeconomic Analysis	Core	
Spr 11	Econ 308	Healthcare Economics	Core	
Spr 11	MBB 586	Seminar in Molecular Biology	Elect	
Spr 11	MBB 340	Practical Methods in Biochemistry	Elect	
Fall 11	Econ 302	Macroeconomic Analysis	Core	
Fall 11	Soc 315	The Health of Communities	Core	
Spr 12	MBB 321	Biomedical Chemistry	Core	
Spr 12	MBB 294	Adv. Lab in Molecular Biol. and Genetics	Elect	
Spr 12	SSSP 202	Philosophy of Science	Elect	

