

## Reflective Essay

In 2011 I became an Assistant Professor and [REDACTED] To date I am confident that I have successfully fulfilled all of the expectations as outlined in my contract -- and well beyond. My work effort is differentiated as follows:

50% teaching/advising, 40% administration, 10% research/scholarly activities

### INTRODUCTORY STATEMENT

Under my leadership (and to be sure with the extraordinary commitment of 'my team') the entire educational component within the department has experienced remarkable growth. Prior to 2011, there were some 17 active graduate students, with at best a fragmented leadership. The program was described as inconsistent and disorganized; student interest and retention suffered accordingly. Over the past several years I have led a year-over-year net growth rate of 53%, 38%, 39% and 48%; I now oversee 75 active graduate students.

As we have added new faculty, our course offerings have become more numerous and increasingly diverse. Strategic new faculty hires, with the goal of bolstering academic areas motivated by student interest, has demanded a more complex and nuanced approach with respect to conceptualizing and implementing a dynamic curriculum that successfully assimilates contemporary epidemiological theory and a strong methodological focus within the context of practice/public health relevance. I confront these challenges within the context of oversight responsibility for three separate graduate degree trajectories. Just two years ago we offered M.S. and Ph.D. Epidemiology degrees; over the past two years I have played a vital role in bringing our most recent M.S. in Biostatistics degree to fruition, and I will soon be in a key leadership position tasked with developing and implementing our department's commitment to establishing a Ph.D. degree in biostatistics.

As to be expected, my duties over time have become more demanding and considerably more challenging, and I am enthusiastic about leading our department's robust continued growth with an eye toward quality of experience for students and faculty alike. As one such faculty, I have an acute bird's eye view of our departmental goals in terms of teaching, mentoring, scholarship and overall educational administration, and I am eager to continue in my leadership role to advance our departmental and college-level presence within the broader MSU intellectual community.

### **TEACHING and MENTORING**

My primary formal teaching contributions to the Department include one undergraduate and two graduate-level courses during the academic year, and one undergraduate course during the summer session. Directly below I provide teaching/course-related highlights; Teaching Portfolio and *c.v.* enclosures provide significantly greater detail *vis-à-vis* comprehensive descriptions of course content along with several personal narratives on, for example, matters of teaching pedagogy, instructional design, and student learning effectiveness. Additionally, SIRS forms, with quantitative and qualitative feedback, are included for review.

[REDACTED] is a large lecture-format class that I have taught each of the past four spring semesters. The class reaches maximum capacity during the first week of open enrollment, and closes except for granting overrides on a case-by-case basis. Since I began teaching the class it has enrolled

1,100+ undergraduate students representing over 70 different majors across multiple colleges. The course is also a core requirement for those pursuing our popular Minor in Global Public Health and Epidemiology. Given this course's popularity across many disciplines, it serves as the department's footprint into areas within the broader university curriculum to which students might not otherwise become exposed. Given the popularity of Epi 390 and the impracticality of accommodating 100% of the student demand, I was tasked with developing a fully on-line version of the course to be taught during the summer session. I had sole responsibility for conceptualizing what such an offering would look like, how by necessity it would need to differ from the AY class, and how the learning environment would be "experienced" differently in this new format. In short, the initial offering enrolled 93 students, and this past summer 103. Thus, I have been able to accommodate some of the unmet student demand, and now for the first time the Department [REDACTED] is a presence in the on-line teaching environment at MSU. My achievements with these on-line offerings has demonstrated a successful "proof-of-concept" for us and so motivated interest to expand this experience to several other courses as early as the summer 2016 semester.

***Epi 805 (Historical Roots of Epidemiological Thought)...***

is a small graduate-level seminar style class required of all doctoral students. I am currently teaching this class for the third straight year, having taken over from a senior member of the faculty. While enrollment naturally ebbs and flows based on the number of Ph.D. students in the program at any given time, the course was in need of intellectual re-invigoration and renewed energy when I became the Instructor. While the major 'must read' works are still included, I have changed the required readings considerably, mainly by way of adding selections that challenge students to connect the 'classics' to contemporary issues in epidemiology and public health.

***Epi 828 (Responsible Conduct of Research)...***

is also a small graduate-level seminar style course requirement. I am teaching this class for the third straight year, and I have added considerably to the required readings in order to take advantage of more focused epidemiological and public health examples than had been the case.

***[Epi 547 -- Information Management: Applications of Epidemiology and Biostatistics]...***

I have twice served as small group Preceptor for this required course within the CHM curriculum.

[In brief, I have taught well over 3,000 undergraduate, graduate and medical students combined in 13 completely different classes by way of 65+ total course offerings across 5 different major universities. I have been an invited guest lecturer in 30+ courses, have taught in Cambridge and London, England, have actively recruited and secured funding for students from underrepresented backgrounds, have directed Independent Studies and Honors Options for 35+ students, I have been Committee Chair for two Ph.D. and 14 M.S. students [REDACTED], and I currently serve as Chair for 4 M.S. students and maintain committee membership for 4 M.S. and for 4 Ph.D. students. I have received mentorship awards, secured competitive novel course-development funding, and have been honored with three prestigious teaching awards.]

## ADMINISTRATION

### Departmental:

In my current position as [REDACTED] I am responsible for the implementation of the entire graduate program, and for the general supervision of the entire graduate student cohort enrolled at any given time. This oversight includes students pursuing one of three degrees (in several cases multiple degrees or joint medical/graduate degrees): Epidemiology M.S. and Ph.D., and Biostatistics M.S. As previously mentioned, a Biostatistics Ph.D. is in the planning stages.

For simplicity, I outline my duties and accomplishments pertaining to the administrative portion of my job activities under the following headings.

### Graduate Program Committee (GPC):

I serve as Chair of the GPC, which fulfills multiple key functions, including making all final **graduate admissions decisions**. I also meet with and advise students who are not making sufficient academic progress in coursework. In essence, the GPC confronts all matters related to graduate students individually; policies having implications involving the student body are addressed by my Curriculum Committee. As [REDACTED] Chair, I coordinate the full spectrum of disciplinary measures should students fail to meet departmental milestones, including not passing the Ph.D. Comprehensive Examinations.

We now review approximately 100 applications/year, a rate many times higher compared to 2011. In terms of new first-year cohorts, the past few years have also seen a substantial increase in numbers -- this past cycle we experienced the largest incoming class of students (7 Ph.D., 10 M.S. Epidemiology, 7 M.S. Biostatistics) in the history of the department. Significantly, we maintain a very **robust retention rate** of about 80%, which represents those students who have either graduated or are still actively pursuing their degree. This outcome has been achieved, in part, with a stepped-up commitment to student success that is no doubt a consequence of aggressive efforts focused on identifying struggling students earlier in their training. We are also now vigilant about monitoring progress toward degree, and in finalizing all graduation requirements.

### Curriculum and Comprehensive Exams:

I Chair the Curriculum Committee, where I oversee and now regularly monitor all matters related to departmental course offerings. Over time, I have significantly improved the delivery of our entire educational mission -- examples include approval and integration of newly developed courses into the core and elective curriculum, student advising as to efficient course sequencing, annual overview of all students' plans of work from admissions to thesis/dissertation defense, and formal implementation of, and stricter adherence to, post-defense revision timelines. I also act as intermediary between students and faculty if course-related conflicts arise. I evaluate course equivalency requests, working directly with students to select appropriate alternative offerings consistent with their academic interests.

All Ph.D. candidates must take and pass Comprehensive Examinations in [REDACTED] [REDACTED] coordinated this activity. I am (and have been for several exam cycles) currently solely responsible for soliciting exam questions for the epidemiology portion of the exam, designing the exam, coordinating the blinding of the grading, and overseeing and evaluating the results.

### Recruitment:

When I became the [REDACTED] existed little in the way of a structured recruitment strategy. Doctoral students were generally recruited by word of mouth within the academy, or perhaps by chance meeting at a professional conference. Under these circumstances, the promise of funding was not uncommon. At that time, the department's two NIH-funded T32 Training Programs (Perinatal and Drug Dependence Epidemiology) were at capacity. However, attracting additional Ph.D. and M.S. applicants was considerably more difficult, as was attracting the interest of new applications; hence, enrollments were barely staying steady, and even dropping. One attempt to ameliorate this problem was to establish a formal standing, regularly meeting, group of faculty who were willing to actively recruit. I was named Chair of this group and serve as a permanent committee member. In brief here, whenever possible I attend campus recruitment events, speak regularly with several pre-professional groups on campus, and travel beyond campus as appropriate.

Approximately two years ago recruitment became considerably more complex as we fulfilled a strategic departmental goal of offering admissions to a first cohort of M.S. biostatistics students. [REDACTED], in conjunction with the biostatistics core faculty, I helped develop and have approved (by the CHM Graduate Studies Committee) the necessary course offerings for the implementation of this new degree. Additionally, admissions guidelines had to be established, as I am also Director of Graduate Admissions for the full department. I am pleased to say that this past semester members of the first cohort successfully achieved the M.S. in Biostatistics degree and I expect additional graduates in successive future semesters.

### Additional:

I participate with a group of senior faculty to regularly review end-of-semester evaluation (SIRS) forms for all courses, I coordinate the annual Graduate Student Orientation, and I act as faculty representative to the Graduate Epidemiology Student Group.

### College (CHM):

In December 2014 I was elected to Chair the CHM Graduate Studies Committee, where I lead faculty from numerous graduate programs within the college seeking approval for new course offerings, and/or needing approval for substantive changes to one or more of their own courses, among other issues that may arise.

I am also currently serving on the Student Performance Committee (SPC). "The SPC develops and recommends criteria... for promotion, retention, suspension and dismissal from the CHM" (per SPC Handbook). The committee is responsible for setting the standards and policy as relates to acceptable medical student progress, including promotion and retention.

### University:

I currently serve as a member of the University Academic Integrity Hearing Board. This Board presides over "academic grievances brought by a student to contest a penalty grade based on a charge of academic misconduct."

## **RESEARCH**

In my current position [REDACTED], by contract, I devote approximately 10% of my work effort to research. The following represents a highly abbreviated outline of my research trajectory and my current interests. Details can be found in my *c.v.*

As an [REDACTED] I completed an NSF-supported dissertation that represented the first ever comprehensive study of skeletal health in Great Lakes Native American populations. The primary aim of this work was to investigate postcranial (leg and arm bones) skeletal structural adaptations in archaeological populations from Michigan just prior to, and soon after, European (French) culture contact, with the idea that differences in long bone structure over time may have coincided with changes in physical activity patterns. Analyses consisted of measuring anthropometric parameters associated with external contours of irregularly shaped bone dimensions, and the use of civil engineering models to derive algorithms used to reconstruct three-dimensional cross-sectional bone images via computed tomographic (CT) scan. Ultimately, sexual division of labor comparisons consistent with variations in physical workload over time were the outcomes of interest. Results showed that for males and females, major leg and arm bones became more gracile, but stronger, as indicated by the adaptive remodeling of skeletal tissue in order to accommodate increased biomechanical demand after European-Native American contact. The work went on to examine archaeological and ethnohistorical records in order to uncover biocultural correlates consistent with these anatomical findings.

With expertise in building complex mathematical models of skeletal biomechanics, I received a Dean's Post-Graduate Research Fellowship within the Department of Internal Medicine, Wayne State University (WSU) School of Medicine. My research here focused on post-menopausal osteoporosis in living females, and I launched into what would be my first intensive experience working within an epidemiologically-focused skeletal health domain when I became Study Coordinator for the 'skeletal arm' of WSU's involvement with the Women's Health Initiative research study on proximal femoral morphology and strength, with the goal to understand ethnic differences in the risk of osteoporotic fragility fracture.

With strength and experience in the epidemiology of bone and skeletal system health, I secured a T32 NIDA-supported Research Fellowship in the MSU Department of Epidemiology and Biostatistics, where I received advanced training in drug dependence epidemiology under the mentorship of [REDACTED]. While I returned to the mid-Michigan area for personal reasons, I used this fortunate opportunity to develop my current primary research interest, which focuses on the intersection of drug dependence epidemiology and skeletal health and disease.

Within the NIDA intellectual domain I regularly attend and present at the College on Problems of Drug Dependence (CPDD). CPDD is the longest standing group in the U.S. addressing problems of drug dependence and abuse. Within a short time of becoming a regular meeting participant, I was nominated for a position, and currently serve, on the Education, Outreach and Public Policy Committee (EOPP).

A main interest here is exploring ethnic disparities and women's health, gene-environment interactions, ageing, and socioeconomic factors vis-à-vis patterns of drug/polydrug use (see [REDACTED]. [REDACTED] "Polydrug Use: Research Topics and Issues." 2013; *Oxford University Press*), including the co-occurrence of tobacco and alcohol exposures. This drug-drug combination focus supports my continued research interests which include (a) advancing this fledgling field of drug use-skeletal health-oriented epidemiology by 'bridging' the influence of drug dependence on skeletal health and (b) exploring the degree to which alcohol, tobacco, and other drugs compromise one's health as drug users – and especially females -- age. Ultimately the hope is to better understand the patterns and variability associated with the effects of tobacco-alcohol on (early) menopause, and on early predictors of osteoporosis and subsequent fracture risk.