

November

Roy Ritz  
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c/o Rebecca  
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Sincerely,



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Proposal for a Dual Degree between  
Bioethics (MA) and the Genetic Counseling Training Program (MS)

Dual Degree Program Directors: Aaron Goldenberg, PhD & Anne Matthews, PhD

A. Brief Summary

We are proposing the creation of a Dual information on families, and utility of genomic information. Additionally, there are a number of important questions regarding equity and access to these new technologies among underserved or uninsured families. This raises questions about the potential negative impact that differential access to these technologies may have on health disparities. Addressing these issues requires comprehensive education and counseling for patients and families going through various forms of genetic screening. Genetic Counselors will need to not only interpret the genetic/genomic findings themselves, but to contextualize those findings within the broader social and ethical impact of these technologies. Nevertheless, there is currently only one academic program in the U.S. that fully integrates training in Genetic Counseling and Bioethics as a dual degree program

We are very fortunate at Case to have prominent Masters Programs in both Genetic Counseling and Bioethics. The collaborative nature between the two programs is well established. For example, Bioethics is integrated into the Genetic Counseling curriculum, and strong interest among students from both programs, there is no formal collaborative training program. We are proposing a dual degree program between the MA program in Bioethics and the MS in Genetic Counseling.

While genetic counseling programs all provide some ethics training to their students, the ethics curriculum tend to focus on ethical issues that arise in practice and professional life. The dual degree program however will allow students to pursue a broader exploration into ethics scholarship, develop methodological empirical ethics skills, and deeply explore topics of

knowledge in the counseling of patients, for example, deciding whether to pursue genomic screening with a trained eye for the personal and ethical implications of the results. Graduates will be more prepared to participate in the ongoing national dialogue about the ethical, legal, and social implications of advances in genomic technology. Additionally, many genetic counselors are becoming more involved in research within their home institutions and with other counselors nationwide. This research frequently focuses on patient uptake and perceptions of new genetic testing technology, patient preferences regarding genetic services, and issues related to genetic discrimination, privacy, and the return of genetic and genomic results. All of these topic areas raise unique ethical, legal, and social implications. A Dual Degree in Genetic Counseling and Bioethics would enhance a graduate's ability to engage in these issues and increase the value and skill set they bring to the research team.

The MSGC Degree is a "terminal" degree in the sense that persons with the degree will be able to pursue a variety of career paths. The MA in bioethics is not traditionally a "terminal degree" in that it enhances careers in other fields – e.g. law, medicine, nursing, public health or in this case, genetic counseling. Thus, the dual bioethics/genetic counseling degree would fuel careers in every aspect of genomics and health, clinical genetics, and health policy.

### C. Institutional Partners

This project would be developed within the contexts of two primary institutional and programmatic partners:

#### 1. The Masters in Bioethics Program, Department of Bioethics (Plan B)

The Department of Bioethics Master of Arts program in Bioethics emphasizes multi- and interdisciplinary nature of the field. The master's degree programs reflect our values: to provide excellent education in bioethics to students and professionals in the School of Medicine and throughout the University; contribute outstanding research and scholarship to the world literature in bioethics; provide local, regional, and national service to health professionals, policy makers, and the public; and to promote international bioethical dialogue through research collaborations, training programs, and institutional partnerships. The program has an excellent track record of training students in Bioethics. Since its inception the program has graduated over 185 students. Many of these students have gone on to PhD programs, medical school, law school, or work in the areas of bioethics research, research oversight, or clinical ethics. Moreover, the Department of Bioethics has a very strong track record regarding dual degree programs and currently offers programs in Medicine, Law, Public Health, Nursing, Social Work, and Genetics. The standalone Bioethics MA is 27 credits and includes a Final Project/Paper that allows the student to engage in a deep exploration of a bioethics topic of their choosing.

#### 2. The Genetic Counseling Training Program, Department of Genetics and Genome

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administered by the American Board of Genetic Counseling (ABGC). The Program strives to train students who can interface between patients, clinical and molecular and human geneticists. The standard Genetic Counseling degree is 40 credits includes both a written and oral comprehensive exam given in their second year and the completion of a research project. The Program has had an excellent track record: approximately 500 applications are received each year; since 2000, 60 students have graduated; there has been a 98% pass rate on the ABGC certification examination; and 90+% are employed as genetic counselors throughout the US and Canada.

#### D. Dual Degree Program Leadership and Anticipated Participation

The dual Degree in Genetic Counseling and Bioethics will be directed by Dr. Anne Mathews, Professor of Genetics and Genome Sciences and Dr. Aaron Goldenberg, Associate Professor of Bioethics. It will utilize the expertise of other genetics and bioethics faculty. We anticipate that we will accept up to two students each year for the Genetic Counseling/Bioethics Dual Degree Program (currently the Genetic Counseling Training Program accommodate six students). In the future, we may be able to accommodate more students depending on the size of the genetic counseling program (the Genetic Counseling Program is planning on expanding their program to eight students per year within the next two years) and available faculty.

#### E. Dual Degree Requirements

The curriculum for the Dual Genetic Counseling/Bioethics Degree will consist of 59 credit hours to be completed in 2.5 years (Option 2) See Appendix. This program will allow an enrolled student to finish the program in 5 full time semesters. Students en pr 5 hnt studentsppem -7t11 0 Tw [

in Clinical Settings



## Program Evaluation and Outcome Assessment

Outcomes data to assess the dual degree Program's efficacy will be evaluated based on graduates' performance on the American Board of Genetic Counseling certification examination and graduates' employment and professional activities following graduation. Graduates will be contacted on a yearly basis and asked to update their contact information and provide a short narrative of their current activities. They will also be queried via ~~alim~~ survey approximately two years after graduation and asked to provide information about their employment, the types of positions they hold, their involvement in national organizations, types of research they have participated in and how their ethics training has expanded or promoted their professional roles.

## Appendix A: Dual Degree Curriculum

Total Credit Hours = 59

Genetic counseling = 32 hrs; Bioethics = 18; Count for both = 9 (BETH 412 – 3; GENE 601 Research – 6)

	FALL			SPRING			SUMMER
	Course #	Name	Credit Hrs	Course #	Name	Credit H	
YEAR	GENE 524	AMG: Cyto/Molecular Genetics					
1	GENE 526	AMG: Quant/Genomics		2			
	GENE 528	Principles Genetic Counseling	3				



