#### JHU/NIH GCTP Trainee Handbook 2021-22

#### **Table of Contents**

JHSPH, NIH FAES, and JHU School of Education Academic Calendars	
JHSPH Academic Calendar	4
NIH FAES Academic Calendar	10
JHU School of Education Academic Calendar	12
Key Contacts	13
JHU/NIH Genetic Counseling Training Program Executive Committee	1!
Student Resources	1
Johns Hopkins Student Assistance Program	1 <sup>-</sup>
NIH Employee Assistance Program	18
NIH Civil Program	20
NIH Office of Intramural Training and Education	22
JHU/NIH GCTP Program Overview	20
Program Description	2
Curriculum Overview	28
Program Accreditation	29
Clinical Training and Fieldwork Opportunities	29
Research Training	30
Participating Faculty and Advisors	30
Strategic Plan	32
Practice-Based Competencies for Genetic Counselors	30
Departmental Description and Degree Requirements - MASTER OF SCIENCE IN GENETIC COUNSELING	38
2021-22 Curriculum for Sc.M. Program in Genetic Counseling	4

Aca	idemic Advising	47
Aca	idemic due dates for the ScM	51
Thesis	Guidelines	53
Thesis	S Action Timelines	62
Helpfu	ul Thesis Links	70

# JHSPH, NIH FAES, and JHU School of Education Academic Calendars

The vast majority of courses will be held according to the Johns Hopkins Bloomberg School of Public Health Academic Calendar. However, some classes that are cross-listed with the NIH Foundation for Advanced Education in the Sciences (FAES) are scheduled according to the FAES calendar. Courses following the FAES calendar are the following:

Introduction to Medical Genetics I and II

Medical Genetics and Genomic Medicine: From Diagnosis to Treatment I and II

Current Topics in Molecular Genetics (elective)

The first year elective course "Counseling Theory and Practice" is scheduled according to the Johns Hopkins School of Education Academic Calendar.

All three calendars follow.

#### JHSPH Academic Calendar

#### 1st Term

Monday, August 30 - Monday, October 25 (40 class days)

# Registration Begins for 1st Term for Continuing Students & Special Students Monday, April 26

#### **Registration Begins for 1st Term for New Students**

Thursday, July 1

#### 1st Term Registration Ends for all Students

Friday, August 27

#### **NEW STUDENT ORIENTATION**

Wednesday, August 25 - Friday, August 27

#### **Instruction Begins for 1st Term**

Monday, August 30

#### Add Period

Monday, August 30 - Friday, September 3

## **Drop Period**

Monday, August 30 - Friday, September 10

#### **LABOR DAY RECESS**

Monday, September 6

#### Last Day to Make Schedule Changes for 1st Term (Course withdrawal deadline)

Monday, October 11

# **Last Day of Class for 1st Term**

Monday, October 25

#### **Grades Due for 1st Term**

Friday, November 5

#### 2nd Term

Tuesday, October 26 - Wednesday, December 22 (40 class days)

#### **Registration Begins for 2nd Term**

Monday, April 26

## **2nd Term Registration Ends**

Friday, October 22

### **Instruction Begins for 2nd Term**

Tuesday, October 26

#### **Add Period**

Tuesday, October 26 - Monday, November 1

#### **Drop Period**

Tuesday, October 26 - Monday, November 8

#### THANKSGIVING RECESS

Thursday, November 25 - Sunday, November 28

# Last Day to Make Schedule Changes for 2nd Term (Course withdrawal deadline)

Wednesday, December 8

## **Last Class Day of 2nd Term**

Wednesday, December 22

#### **Grades Due for 2nd Term**

Tuesday, January 4\*

#### Winter Intersession

Tuesday, January 4 - Friday, January 21

### **Registration Begins for Winter Intersession**

Friday, October 1

## **Registration Ends for Winter Intersession**

Wednesday, December 29

#### Part-time/Online MPH NEW STUDENT ORIENTATION

Monday, January 3

\*\*Add/Drop Period and Last Day to Make Schedule Changes for Winter Intersession varies per course

#### **Grades Due for Winter**

Friday, January 28

#### 3rd Term

Monday, January 24 - Friday, March 18 (40 class days)

## **Registration Begins for 3rd Term**

Monday, November 15

# **3rd Term Registration Ends**

Friday, January 21

#### MARTIN LUTHER KING, JR. HOLIDAY RECESS

Monday, January 17

#### **Instruction Begins for 3rd Term**

Monday, January 24

#### **Add Period**

Monday, January 24 - Friday, January 28

#### **Drop Period**

Monday, January 24 - Friday, February 4

#### Last Day to Make Schedule Changes for 3rd Term (Course withdrawal deadline)

Friday, March 4

## **Last Day of Class for 3rd Term**

Friday, March 18

#### **Grades Due for 3rd Term**

Friday, April 1

#### 4th Term

Monday, March 28 - Friday, May 20 (40 class days)

# **Registration Begins for 4th Term**

Monday, November 15

#### 4th Term Registration Ends

Friday, March 25

#### **Instruction Begins for 4th Term**

Monday, March 28

#### Add Period

Monday, March 28 - Friday, April 1

#### **Drop Period**

Monday, March 28 - Friday, April 8

#### Last Day to Make Schedule Changes for 4th Term (Course withdrawal deadline)

Friday, May 6

#### **Last Day of Class for 4th Term**

Friday, May 20

#### PUBLIC HEALTH CONVOCATION CEREMONY

Tuesday, May 24

#### **UNIVERSITY COMMENCEMENT CEREMONY**

Thursday, May 26

# **Grades Due for 4th Term**

Friday, June 3\*

# **RESIDENCY PROGRAM ENDS**

Thursday, June 30

<sup>\*</sup> Grades for graduating students are due on the last day of the term

# NIH FAES Academic Calendar

Fall 2021 Term	
Open Registration	July 6 – October 22
'Session A' Courses Start and End	August 30 – October 15
'Session A' Courses Late Registration*	August 30 – September 3
'Session B' Start and End	October 25 – December 10
'Session B' Courses Late Registration*	October 25 – October 29

January 2022 Intersession	
Open Registration	November 15 - January 7
Intersession Courses Start and End	January 10 - 28

Spring 2022 Term	
Open Registration	November 29 – March 25
'Session A' Courses Start and End	January 31 – March 18
'Session A' Courses Late Registration*	January 31 – February 4
'Session B' Start and End	March 28 – May 13
'Session B' Courses Late Registration*	March 28 – April 1

May 2022 Intersession	
Open Registration	March 21 - May 6
Intersession Courses Start and End	May 9 - May 27

Summer 2022 Term	
Open Registration	April 18 – June 10
'Session A' Courses Start and End	June 13 – July 29
'Session A' Courses Late Registration*	June 13 – June 17

# JHU School of Education Academic Calendar

Fall Semester 2021		
April 12 - August 13	Registration period for Fall 2021 semester	
August 30	Fall 2021 semester classes begin	
September 6	Labor Day; no classes held	
November 22 - November 28	Thanksgiving break; no classes held	
December 20	Last day of fall 2021 semester	
Spring Semester 2022		
January 17	Martin Luther King, Jr., holiday	
January 24	Spring 2022 semester classes begin	
March 21 - 27	Spring Break; no classes held	
May 14	Last day of spring 2022 semester	

# **Key Contacts**

Program Leadership

Program Director: Lori Erby, ScM, PhD, CGC <u>lori.erby@nih.gov</u>

301-443-2635

Associate Director: Megan Cho, ScM, CGC megan.cho@nih.gov

301-655-4551

**Associate Director** 

of Cancer Genomics: Leila Jamal, ScM, PhD, CGC <u>leila.jamal@nih.gov</u>

Academic Director: Debra Roter, DrPH droter1@jhu.edu

410-955-6498

Medical Director: Chuck Venditti, MD, PhD <u>venditti@mail.nih.gov</u>

301-496-6213

**Program Coordinator** 

NIH Coordinator: Maddie Piper <u>maddie.piper@nih.gov</u>

For questions related to NIH, including but not limited to fellowship, travel, and research funding

**Academic Coordinator** 

Johns Hopkins HBS

Academic Coordinator: Robin Newcomb <u>rnewcomb@jhmi.edu</u>

For questions related to Johns Hopkins, including but not limited to registration and financial aid

#### Office hours

Program Leadership hosts weekly virtual office hours. Students are encouraged to attend with questions or just to chat. Times may vary by quarter but will be posted on the shared calendar.

# JHU/NIH Genetic Counseling Training Program Executive Committee

# NIH Faculty

Lori Erby, Ph.D., Sc.M., C.G.C.
Center for Precision Health Research, NHGRI
Megan Cho, Sc.M., C.G.C.
Center for Precision Health Research, NHGRI
Leila Jamal, ScM, PhD., C.G.C
Center for Cancer Research, NCI
Leslie Biesecker, M.D.
Center for Precision Health Research, NHGRI

Kathy Helzlsouer, M.D., M.H.S.

Division of Cancer Control and Population Sciences, NCI

William Klein, Ph.D.

Division of Cancer Control and Population Sciences, NCI

Donna Krasnewich, M.D., Ph.D.

Division of Genetics and Developmental Biology, NIGMS

Julie Sapp, Sc.M., C.G.C.

Center for Precision Health Research, NHGRI

Charles Venditti, M.D., Ph.D.

Metabolic Medicine Branch, NHGRI

#### JHU Faculty

Debra Roter, Dr.PH Department of Health, Behavior and Society, JHSPH Joann Bodurtha, M.D., M.P.H.
Institute of Genetic Medicine, JHU
Julie Cohen, Sc.M., C.G.C.
Division of Neurogenetics, KKI
Cynthia James, ScM, PhD., C.G.C.
Department of Medicine, JHU
Howard Levy, M.D., Ph.D.
Department of Medicine, JHU
Sara Neelon, Ph.D.
Department of Health, Behavior and Society, JHSPH
Jill Owczarzak, Ph.D.
Department of Health, Behavior and Society, JHSPH

#### Student Resources

# Johns Hopkins Student Assistance Program <a href="https://jhsap.org/">https://jhsap.org/</a>

#### JHSAP Services During the Intersecting Crises of 2020-2021:

We know that the COVID-19 pandemic, the ongoing racial injustice crisis, and ongoing political upheaval are causing significant disruption, anxiety, and distress within our community. JHSAP is committed to supporting students, wherever they may be, with services to support their emotional well-being during these distressing and disruptive times.

- 24/7 mental health support is available for students by calling the JHSAP number: 443-287-7000, option #1.
- Televideo services are available for students who are in Maryland, DC, Pennsylvania, and Delaware and
  whose mental health needs can be served via telehealth. Televideo, phone, or email consultations will be
  scheduled for students outside these areas.
- Students who are already working with a JHSAP clinician may call JHSAP at 443-287-7000, option #1 or send their clinician a secure message to jhsap@jhu.edu for any non-urgent issues.
- JHSAP is glad to assist students in finding care resources within their communities.
- · Consultation to staff and faculty will continue as usual.

#### How to prepare for your televideo JHSAP appointment

Privacy and confidentiality are essential to developing the trust that underlies a therapeutic relationship. Your clinician will be in a private space during your session, and to ensure that both you and your clinician are able to focus and speak openly, we ask that you also find a private space that is free from distractions. If someone enters your private space during the session, we ask that you let your clinician know so that you can pause the session until you're alone again. We understand that at times, finding privacy can be challenging. If this is the case for you, please consult your clinician or JHSAP's student assistance specialist so that we can help problem-solve.

#### Featured

# Opioid Epidemic Awareness & Education Program Available

JHSAP recorded a presentation on the opioid epidemic and available resources.

View the presentation →



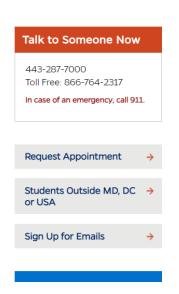
# JHSAP Helps You Manage Life Challenges and Enhance Emotional Well-Being.

The Johns Hopkins Student Assistance Program (JHSAP) is a life management resource for students. JHSAP's licensed clinicians can help you identify and manage challenging issues in healthy ways. Getting help is free, convenient, confidential, and available 24/7/365 by calling 443.287.7000, option #1.

#### Who We Serve:

JHSAP serves students and their spouses or life partners in the following JHU schools and programs:

- · School of Medicine: graduate and medical
- · School of Nursing
- · Bloomberg School of Public Health
- · School of Education
- · School of Advanced International Studies
- · Carey Business School
- Engineering for Professionals Program at the Whiting School of Engineering
- · Advanced Academic Programs at the Krieger School of Arts and Sciences



NIH Employee Assistance Program

https://ors.od.nih.gov/sr/dohs/HealthAndWellness/EAP/Pages/index.aspx



# NIH Civil Program

https://hr.nih.gov/working-nih/civil

Our mission is to foster civility throughout the NIH community.

**Are you aware of a workplace situation involving uncivil behavior?** Contact the Civil Program. Uncivil behavior includes:

- harassment
- sexual harassment
- inappropriate conduct
- intimidation
- bullying or
- other unproductive, disruptive, and/or violent behaviors



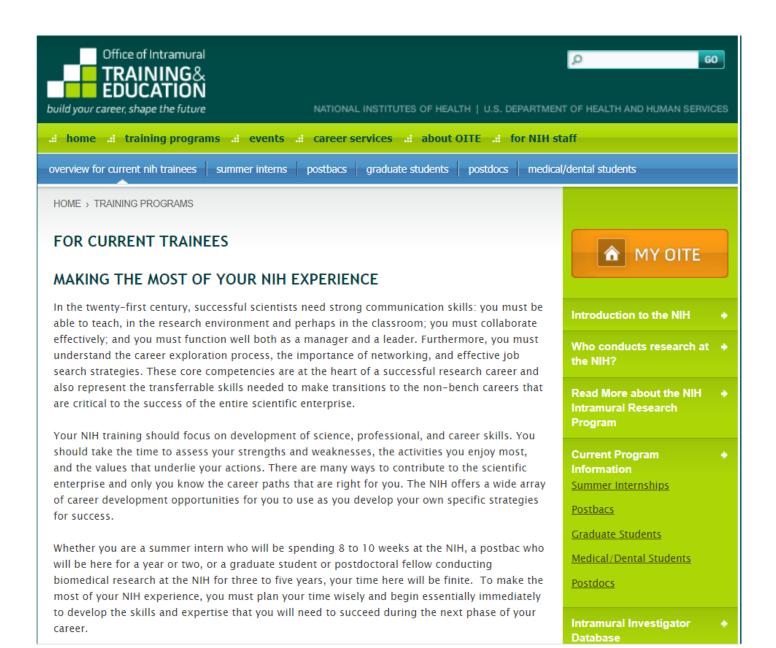
Important Note: Raising an allegation with the Civil Program is not equivalent to or in lieu of filing an EEO Complaint of Discrimination, under 29 C.F.R. 1614, or a grievance under the administrative or negotiated procedures included in the applicable Collective Bargaining Agreement (CBA). If you wish to pursue an EEO complaint, contact the Equity, Diversity, and Inclusion Office within 45 days of the discriminatory incident.

**Understand your options.** Learn more about the <u>difference between the Civil Program</u> and the Office of Equity, <u>Diversity</u>, and <u>Inclusion (EDI)</u>.

Report a Concern

NIH Office of Intramural Training and Education

https://www.training.nih.gov/



The NIH Office of Intramural Training & Education (OITE) encourages you to focus your energies in three major areas:

- Doing outstanding science
- · Attending to your career/professional development
- Exploring and contributing to the community around you

Clearly, science must be your first priority. But it would be a mistake to overlook or short-change the other two areas. OITE offers programs and services to help you develop professionally. We encourage you to work with other trainees in the summer, postbac, GPP, or postdoc community to get to know the DC area and help make it a better place.

#### CAREER/PROFESSIONAL DEVELOPMENT

Career and professional development begin with knowing yourself. Consider completing the Myers Briggs Type Indicator (MBTI), an assessment tool that will help you to understand your psychological makeup in terms of intellectual preferences: how do you take in information about the world around you, how do you make decisions, where do you get your energy? You can also <u>make an appointment</u> with a career counselor for help with self-reflection and increasing your self-awareness. Making solid career decisions depends on understanding what skills you possess, what interests excite you, and what values add meaning to your life.

If you are not already firmly committed to a particular career path (or perhaps even if you are), the next step in career/professional development is career exploration. What options are out there? What are various careers really like, and how does one prepare for them?

It is important to recognize that self-analysis and career exploration will not be restricted to the beginning of your career. In today's world, you are likely to change career directions multiple times, and each transition will require that you return to these activities.

#### CORE COMPETENCIES

There is broad agreement that core competencies provide an excellent way to look at career/professional development. Core competencies are primarily blends of skills and experience that future employers and/or educational institutions will be seeking. Specifically,

- o <u>Communicating in English</u> (if you are not a native English speaker)
- Teaching and Mentoring
- Leadership and Management
- Responsible Conduct of Research
- Wellness

We offer programming in each of these areas.



# JHU/NIH GCTP Program Overview

In 1996, two outstanding research institutions, the National Human Genome Research Institute (NHGRI) at the National Institutes of Health and the Department of Health, Policy and Management (more recently, the Department of Health, Behavior and Society) at the Johns Hopkins Bloomberg School of Public Health (JHSPH), collaborated to establish a unique genetic counseling graduate program. These two institutions were joined in 2019 by the Center for Cancer Research at the National Cancer Institute (NCI). The Johns Hopkins Bloomberg School of Public Health provides a strong academic home for the program including coursework in research methods and public health and research mentoring, while NHGRI and NCI provide funding, coursework in psychological counseling and genomics, research mentoring and dedicated leadership. This collaborative program represents the first allocation of federal funds to support graduate education in genetic counseling and is regarded as a significant effort to address new challenges resulting from the application of genomics research to clinical care.

Mission Statement (officially adopted May, 2021)

The JHU/NIH Genetic Counseling Training Program shapes genetic counseling services through student and faculty research and develops outstanding genetic counselors who are innovators and leaders in:

- psychotherapeutic genetic counseling,
- genetic counseling research and scholarship,
- applications of genomics and precision health
- transdisciplinary learning and practice, incorporating perspectives from public health, policy, ethics, and advocacySince its inception, the program has graduated a cadre of 90 genetic counselors who

are broadening the scope of genetic counseling by contributing to the establishment of a research literature that critically examines aspects of the profession.

#### **Program Description**

The JHU/NIH Genetic Counseling Training Program prepares students for a Master of Science (ScM) degree from the Department of Health, Behavior and Society (HBS). This two- and one-half-year program provides academic preparation beyond that available from most genetic counseling programs. It requires 149 credit hours, including coursework taken at the NIH and Johns Hopkins, a minimum of four hundred contact hours of supervised clinical rotations in a variety of settings, and completion of an original research thesis of publishable quality. Interested students are encouraged to apply for subsequent admission to the HBS doctoral program. Historically, the program accepted four students per year, but with the new partnership with NCI, the program welcomed its first class of six students in 2019.

Students commute between the two campuses, spending approximately two days a week at JHSPH in Baltimore and approximately two days a week at the NIH campus in Bethesda. During most academic terms, students also spend one to two days each week in a clinical rotation in the greater Baltimore-Washington region. At JHSPH, students have access to a departmental student room as well as a quiet library study space on the roof of the main departmental building. In January 2020, the program's NIH offices moved from Building 31 to a new suite in the NIH Clinical Center. The new program suite includes private offices for the Program Director, the Associate Director, and the NIH Program Coordinator as well as carrels for the trainees. There is an additional training space in 5-3121 of the same building for the one time each week when all genetic counseling students are present simultaneously on the NIH campus. There is also a small kitchenette and a small conference room that is large enough to teach the single cohort courses. The trainees have access to the clinical research spaces as well as the clinical research meetings and NIH guest lecturers that frequently speak in the Clinical Center. The new suite also shares a hall with other researchers and genetic counselors from the Medical Genomics and Metabolic Genetics Branch, facilitating collaboration with some of the program's clinical supervisors and teaching faculty.

#### Curriculum Overview

Students take courses throughout the 10 academic quarters. The courses are taught at both the NIH and JHSPH campuses and include genetic and psychological counseling, medical and human genetics, research methods, public health, health communication, bioethics and public policy.

The curriculum is designed to offer an intimate setting for learning genetic counseling concepts and skills, while offering significant interaction with a broader student body. The public health courses are taken with other graduate students in public health at the prestigious Bloomberg School of Public Health. Many of the genetics and genomics courses are taken with the genetics fellows on the NIH campus. The genetic counseling courses taken during each year of the program and the Introduction to Human Genetics course are taught specifically for the genetic counseling trainees.

A unique aspect of the training program is the didactic and experiential focus on psychotherapeutic counseling skills. Trainees take a sequential series of counseling-related courses that allow for the development of skills throughout each year in the program. In addition, each student is assigned to an individual professional supervisor to support the development of their counseling skills. This supervisor is separate from the clinical rotation supervisor and is meant to provide both continuity and depth of feedback throughout a student's training. Students meet individually with the professional supervisor for an hour each week to review audio recordings of their clinical work, to deepen self-awareness, and to explore alternative approaches. The supervision team is made up of genetic counselors who have previously taken part in professional supervision as part of the development of their own psychotherapeutic skills.

The curriculum is also designed to provide students support in the development of an original research question and the completion of the thesis process. In addition to courses in epidemiology, biostatistics, qualitative research methods, and research design, students take a three-term course series to support the development of the thesis proposal. The proposal draft is completed by the middle of the second year in the program, and students defend their ideas during an oral examination prior to submitting the proposal to the IRB for review. Data are collected during the

second summer in the program. Two faculty readers must attest that the written thesis is worthy of publication prior to the completion of the degree. The program funds each student's research project up to \$5000.

There are additional opportunities for learning outside of the standard curriculum. The genetic counseling trainees discuss genetic-counseling related articles during a quarterly journal club held at the homes of Executive Committee members. They each give scholarly case presentations during their first and third years in the program as part of the NIH Post-Clinic Conference. The program supports the attendance of all second- and third-year students at the annual conference of the National Society of Genetic Counselors, where they are encouraged to present the results of their thesis projects after graduation.

#### **Program Accreditation**

The JHU/NIH Genetic Counseling Training Program is fully accredited by the Accreditation Council for Genetic Counseling through January 2024. Graduates are eligible to sit for their American Board of Genetic Counseling certification examinations after completing the degree program and a logbook demonstrating significant involvement in at least 50 different cases.

#### Clinical Training and Fieldwork Opportunities

Training for a career in genetic counseling requires extensive interaction with clients in a variety of clinical settings. Accordingly, students have access to more than twenty-five clinical training sites in the Baltimore-Washington area, including adult, pediatric, prenatal, cancer, neurology, cardiology, and lab settings. Training opportunities include clinical research settings at the Johns Hopkins Hospital and the NIH Clinical Research Center. Finally, students have community-based experiences through unique resources located in the area. Other fieldwork opportunities include advocacy, policy, and bioethics rotations.

Rotations begin in the second term of the program with a standardized patient rotation (week 9) and are then required throughout. During the academic year, first and second year students attend their rotations once a week, while third year students attend twice a week. Students also complete a full-time rotation during the summer

between the first and second year of study, and many do an additional optional rotation during the second summer. Rotations provide a critical opportunity for students to gain and apply knowledge about genetic conditions, their impact on individuals and their families, and the role of the professional genetic counselor. Genetic counseling preceptors provide clinical supervision.

Students have an opportunity to be involved with well over the required 50 clinical cases during their training in our program, with the most recent graduating class completing an average of 143 unique cases each.

#### Research Training

A primary goal of the program is to train students to conduct applied research relevant to the practice of the field of genetic counseling. Students' research questions examine the social, behavioral, ethical, and policy elements of genetic counseling practice as well as elements of genetic counseling service delivery. The program involves faculty who serve as thesis advisors and committee members with diverse backgrounds and expertise in genetics, genomics, public health, bioethics, and social and behavioral research.

#### Participating Faculty and Advisors

The program is overseen by the Program Director, Lori Erby, Ph.D., Sc.M., a staff scientist in the NHGRI Medical Genomics and Metabolic Genetics Branch. The Academic Director, Debra Roter, Dr.PH, is a Distinguished University Professor in the Department of Health, Behavior and Society at JHSPH and provides instruction, faculty advising and research oversight. Megan Cho, Sc.M., Genetic Counselor, NHGRI, serves as Associate Director of the Program, and Leila Jamal, ScM, PhD serves as Associate Director of Cancer Genomics. Charles Venditti, M.D, Ph.D., Senior Investigator, NHGRI, serves as Medical Director of the Program.

Students are assigned to a faculty advisor from either the NIH or JHSPH upon arrival to the program. Once the student has identified a research question (usually by the middle of their first summer), the student chooses a new advisor who is best suited to provide assistance on the chosen topic. Advisors monitor students' progress, advise them on

coursework and clinical rotations, and assist in selecting a thesis committee. NIH faculty, alongside of JHU faculty, serve as mentors in thesis design and IRB proposal development. An Executive Committee comprised of sixteen faculty members from the NIH and JHU administers the oral and written comprehensive examinations, monitors student progress, serves as the admissions committee, evaluates the curriculum and serves as thesis advisors. In 2009, the Working Group was first convened to advise the NHGRI Scientific Director and GCTP Executive Committee annually on the direction and future development of the program.

# Strategic Plan

#### Preamble

The JHU/NIH Genetic Counseling Training Program 2021 strategic plan is intended to guide the Program Leadership and the Executive Committee in decision-making about all aspects of the training program. The document is also designed to communicate to applicants about the nature of our program.

Although we have articulated five separate domains that each inform specific goals, each of the five domains are inter-related, and there are inherently cross-cutting themes between them.

#### **Mission Statement**

The JHU/NIH Genetic Counseling Training Program shapes genetic counseling services through student and faculty research and develops outstanding genetic counselors who are innovators and leaders in:

- psychotherapeutic genetic counseling,
- genetic counseling research and scholarship,
- applications of genomics and precision health
- transdisciplinary learning and practice, incorporating perspectives from public health, policy, ethics, and advocacy

#### **Vision**

Genetic counseling clinician scholars transform evidence-based genomic healthcare.

#### Psychotherapeutic Genetic Counseling

Goal 1: Train and support students' individual paths as they learn to employ a wide array of advanced psychotherapeutic counseling approaches to care for clients across genetic counseling contexts

Goal 2: Provide thought leadership and evidence related to the role of psychotherapeutic genetic counseling theories and techniques in optimizing client outcomes

#### **Genetic Counseling Research and Scholarship**

Goal 1: Foster students' ability to contribute to the evidence base in genetic counseling by engaging in and actively mentoring students in genetic counseling research

Goal 2: Train and equip students to investigate a broad and cross-cutting array of key scientific questions that inform and transform the evolving field of genetic counseling

#### **Applications of Genomics and Precision Health**

Goal 1: Enable students to become experts in genetics and genomic perspectives in diagnosis, risk assessment, prognosis, and treatment, including applications to Mendelian disease, common complex disease, and precision health

Goal 2: Equip students to become leaders in the development and implementation of innovative genomics and precision health initiatives <u>Transdisciplinary Learning and Practice</u>

Goal 1: Support students in developing and applying an understanding of a variety of disciplinary perspectives, including public health, policy, ethics, and advocacy, in their research and practice as genetic counselors

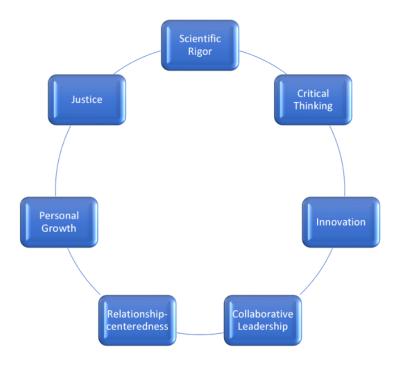
Goal 2: Provide students opportunities to explore one or more disciplinary topics beyond what is required in the formal curriculum

#### Justice, Equity, Diversity, and Inclusion

Goal 1: Promote diversity and inclusion within the JHU/NIH Genetic Counseling Training Program and the broader genetic counseling workforce

Goal 2: Train students to recognize and address health disparities, health equity, and justice in their genetic counseling research and practice

#### Values



#### **Envisioned Future for Genetic Counseling**

In the next ten years, genomic testing will be a routine part of healthcare, and genetic counselors (GCs) will be integrated into healthcare teams and systems. GCs will play an integral role in optimizing how individuals and families improve health and well-being through appropriate use of genomic information. They will advocate for, develop, and implement tailored systems to enhance the personal and clinical utility of genomic data at individual, familial, and population levels. The genetic counseling community will represent the diversity in the nation and will be engaged in enhancing the equitable provision of genetic counseling services. Increasingly, GCs will work outside of traditional medical settings, including in research settings, laboratories, in private companies, and in positions providing guidance related to the delivery of genomic medicine. GCs will provide evidence-based, psychotherapeutically oriented, and client-centered care, and this care will improve cognitive, emotional, and behavioral outcomes for clients. GCs will lead efforts to study service delivery models and to develop evidence-based tools to supplement in-person genetic counseling. They will routinely consult with other care providers and healthcare managers.

Genomic information will become increasingly relevant to healthcare. Every person will interact with their genomic information at multiple points throughout life, and GCs will play a pivotal role in generating evidence supporting implementation of genomic data and translating that evidence into practice.

The JHU/NIH Genetic Counseling Training Program will transform future genetic counseling services through faculty and student research, mentoring, and training innovations.

# Practice-Based Competencies for Genetic Counselors

#### https://www.gceducation.org/wp-content/uploads/2019/06/ACGC-Core-Competencies-Brochure\_15\_Web\_REV-6-2019.pdf

© 2019 Accreditation Council for Genetic Counseling

2

This document defines and describes the twenty two practice-based competencies that an entry-level provider must demonstrate to successfully practice as a genetic counselor. It provides guidance for the training of genetic counselors and an assessment for maintenance of competency of practicing genetic counselors. The didactic and experiential components of a genetic counseling training curriculum and maintenance of competency for providers must support the development of competencies categorized in the following domains: (I) Genetics Expertise and Analysis; (II) Interpersonal, Psychosocial and Counseling Skills; (III) Education; and (IV) Professional Development & Practice. These domains describe the minimal skill set of a genetic counselor, which should be applied across practice settings. Some competencies may be relevant to more than one domain. *Italicized words are defined in the glossary*.

#### **Domain I:** Genetics Expertise and Analysis

- 1. Demonstrate and utilize a depth and breadth of understanding and knowledge of *genetics* and *genomics* core concepts and principles.
- 2. Integrate knowledge of psychosocial aspects of conditions with a genetic component to promote client well-being.
- 3. Construct relevant, targeted and comprehensive personal and family histories and pedigrees.
- 4. Identify, assess, order, facilitate, and integrate genetic/genomic testing options in genetic counseling practice (including molecular and non-molecular testing that directly impacts assessment of inherited risk).
- 5. Assess individuals' and their relatives' probability of conditions with a genetic component or carrier status based on their pedigree, test result(s), and other pertinent information.
- 6. Demonstrate the skills necessary to success-fully manage a genetic counseling case.
- 7. Critically assess genetic/genomic, medical and social science literature and information.

#### **Domain II:** Interpersonal, Psychosocial and Counseling Skills

- 8. Establish a mutually agreed upon genetic counseling agenda with the client.
- 9. Employ active listening and interviewing skills to identify, assess, and empathically respond to stated and emerging concerns.
- 10. Use a range of genetic counseling skills and models to facilitate informed decision- making and adaptation to genetic risks or conditions.
- 11. Promote client-centered, informed, non- coercive and value-based decision-making.
- 12. Understand how to adapt genetic counseling skills for varied service delivery models.
- 13. Apply genetic counseling skills in a culturally responsive and respectful manner to all clients.

#### **Domain III: Education**

- 14. Effectively educate clients about a wide range of genetics and genomics information based on their needs, their characteristics and the circumstances of the encounter.
- 15. Write concise and understandable clinical and scientific information for audiences of varying educational backgrounds.
- 16. Effectively give a presentation on genetics, genomics and genetic counseling issues.

### **Domain IV: Professional Development & Practice**

- 17. Act in accordance with the ethical, legal and philosophical principles and values of the genetic counseling profession and the policies of one's institution or organization.
- 18. Demonstrate understanding of the research process.
- 19. Advocate for individuals, families, communities and the genetic counseling profession.
- 20. Demonstrate a self-reflective, evidenced- based and current approach to genetic counseling practice.
- 21. Understand the methods, roles and responsibilities of the process of clinical supervision of trainees.
- 22. Establish and maintain professional *interdisciplinary relationships* in both team and one-on-one settings, and recognize one's role in the larger healthcare system.

# Departmental Description and Degree Requirements - MASTER OF SCIENCE IN GENETIC COUNSELING

Program Director: Lori Erby, ScM, PhD, CGC
Associate Director: Megan Cho, ScM, CGC
Academic Director: Debra Roter, DrPH

**Associate Director of Cancer** 

Genomics: Leila Jamal, ScM, PhD, CGC

Academic Coordinator: L. Robin Newcomb NIH Program Coordinator: Maddie Piper, BS

# **General Degree Information**

The Genetic Counseling Graduate Program is a joint effort between the Department of Health, Behavior and Society and the National Institutes of Health through the National Human Genome Research Institute (NHGRI) and the National Cancer Institute (NCI). This collaboration draws on resources from the two research institutions to address needs in the genetic counseling profession.

### **Program Requirements**

# **Course Requirements**

The program requires two and one-half years of full-time study. The curriculum consists of at least 149 credit hours of didactic course work in the areas of human genetics, genetic counseling, public policy, research methodology, ethics, and health education. Two credits of Supervised Clinical Rotation must be completed during the summer between the first and second years of study. The coursework is taken on the NIH campus in Bethesda, Maryland, and at Johns Hopkins Medical Campus in Baltimore. Clinical rotations extend in location from northern Baltimore to Washington DC.

Per School regulations, at least 12 credits of formal course work must be completed outside the Department of Health, Behavior and Society, of which at least eight (8) must be earned in another department of the School of Public Health.

# **Satisfactory Academic Progress**

All ScM students in the Department of Health, Behavior and Society are expected to maintain satisfactory academic standards for the duration of the degree program. In the department, satisfactory academic progress is defined as follows:

<u>A minimum grade point average (GPA) of 2.75</u>. Any ScM student who does not obtain the minimum 2.75 GPA will not be eligible to present his/her written research proposal. If this minimum grade point average is not maintained, the Program Directors will meet to determine the appropriate course of action.

ScM students are required to pass all of their clinical rotations and are required to pass a minimum of four semesters of clinical supervision. In the event a student fails to pass a rotation, criteria for repeating and successfully passing the rotation will be determined and communicated by the Program Director.

#### **Clinical Rotations**

In addition to didactic course work, the program requires a minimum of four hundred contact hours of supervised clinical rotations in a variety of settings. Clinical rotations begin in the second quarter of the program and are required throughout. During the first and second years, they are scheduled during one full or two half-days each week. During the third year, they are scheduled for two full days each week. These rotations provide a critical opportunity for students to learn directly about genetic conditions and their impact on individuals and their families, as well as about roles of the professional counselor. Most of the preceptors for clinical rotations are board-certified genetic counselors. Those who are not (medical social workers, health educators, physicians) enhance the clinical training by exposing students to a variety of disciplines. This type of broad experience is endorsed by the Accreditation Council for Genetic Counseling that accredits the program.

#### Thesis

Students are expected to conduct original research worthy of publication as part of their Master's thesis. To this end, students are required to take courses that will provide them with the training and experience to develop, carry out, and publish their research. Students are expected to develop an acceptable thesis proposal by the middle of the second year of study and to conduct their study during the second and third years of the program. Students are expected to prepare a publishable manuscript of their study results and present the findings at a research seminar in January of their third year on the NIH campus in Bethesda.

#### **Comprehensive Examinations**

By December of the student's second year, the student must submit a written thesis research proposal. The written proposal is to be submitted two weeks prior to a scheduled meeting of the Executive Committee faculty. The proposal includes the following sections: an abstract, specific

aims, hypotheses (if applicable), background, research plan, plan for analysis, significance of the proposed work and a timeline. Written feedback is returned to the student for response during an oral examination with the Executive Committee. The student receives a final written evaluation with the stipulations and recommendations detailed. The student's advisor will then prepare a written exam that consists of 4 questions intended to further the student's thinking on topics broadly related to his/her research proposal. This serves as the written component of the comprehensive exam. The Executive Committee faculty members will award a pass/fail grade based on both the written and oral presentations. This grade is recorded as the comprehensive exam.

#### **Institutional Review Board**

An application for SRC (Scientific Review Committee) and NHGRI IRB (Institutional Review Board) review at the NIH or the Johns Hopkins IRB must be submitted after successful completion of the comprehensive exam and prior to beginning thesis research.

Students should discuss any questions about the use of human subjects in their research activities with their advisor.

#### **Program Accreditation**

The Accreditation Council for Genetic Counseling re-accredited the program in 2016 for eight years. Graduates of the program are eligible to sit for the genetic counseling board examinations after completion of the degree program and a clinical logbook demonstrating significant involvement in the evaluation and counseling of at least 50 patients seen in approved rotation sites.

Course location and modality is found on the JHSPH website (https://www.jhsph.edu/courses).

# **Important General Notes**

All students are required to enroll for a minimum of 12 credits per term in order to be considered full-time. If a student opts out of a course that is considered an elective in this curriculum, other electives must be selected with the student's adviser to maintain the 12 credit minimum.

There are three course requirements for which we are able to offer some choices. All options are reflected in the curriculum further below, but students are only required to choose one course from each set of requirements as outlined below:

# QUALITATIVE RESEARCH METHODS REQUIREMENT

Students *must* take one of the following:

For those NOT planning to pursue a qualitative thesis:

- 1. PH.550.604 Qualitative Reasoning in Public Health 2 credits, 1st or 2<sup>nd</sup> term (online) (highly recommended) OR
- 2. PH.552.603 The Role of Qualitative Methods and Science in Describing and Assessing a Population's Health-0.5 credits, 1st, 2nd, or 3rd term (online) (less recommended, discuss with your advisor)

For those considering a qualitative thesis:

- 1. PH.550.604 Qualitative Reasoning in Public Health-2 credits in 1st or 2nd term (online) OR
- 2. <u>PH.410.710</u> Concepts in Qualitative Research for Social and Behavioral Sciences- 3 credits, 2nd term (on-site) Taking one of these courses also allows students to take the following additional elective:

PH.410.712 Theory and Practice in Qualitative Data Analysis and Interpretation for The Social and Behavioral Sciences - 3 credits, 3<sup>rd</sup> term (on-site)

# SOCIAL DETERMINANTS OF HEALTH REQUIREMENT

Students *must* take one of the following:

- 1. <u>PH.410.651</u> Health Literacy: Challenges and Strategies for Effective Communication 3 credits, 2<sup>nd</sup> term (online) OR
- 2. PH.552.610 The Social Determinants of Health -0.5 credits, 1st, 2nd or 3rd term (online)

# **MEDICAL GENETICS REQUIREMENT**

Students *must* take one of the following:

- 1. PH.415.613 Introduction to Medical Genetics I and PH.415.614 Introduction to Medical Genetics II-2 credits each (online) OR
- 2. <u>PH.410.840</u> Special Studies and Research in Health Behavior and Society Medical Genetics for Genetic Counselors- 4 credits (asynchronous online)

# 2021-22 Curriculum for Sc.M. Program in Genetic Counseling

# (All Courses are required unless indicated otherwise. Total credits listed per term include all electives. Actual totals vary.)

First Year	
FIRST TERM	CREDITS
PH.140.621Statistical Methods in Public Health I	4
PH.340.721 Epidemiologic Inference in Public Health I	5
ED.861.502 Counseling Theory and Practice (elective for Psych majors/minors; required for others)	2.5
PH.415.610 Practical Genetic Counseling	2
PH.415.620 Introduction to Genetic Counseling I	2
PH.415.611 Introduction to Human Genetics I	2
PH.415.861 Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2
PH.415.870 Genetic Counseling Clinical Supervision	1
Credits	20.5
SECOND TERM	
PH.140.622Statistical Methods in Public Health II	4
PH.410.615 Research Design in the Social and Behavioral Sciences	3
ED.861.502 Counseling Theory and Practice (elective for Psych majors/minors; required for others)	2.5
PH.415.621 Introduction to Genetic Counseling II	2
PH.415.612 Introduction to Human Genetics II	2
PH.415.861 Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2

PH.415.870 Genetic Counseling Clinical Supervision	1
PH.415.851 Supervised Clinical Rotations: Genetic Counseling (Standardized Patient Rotation - Prenatal)	4
PH.410.651 Health Literacy: Challenges and Strategies for Effective Communication (elective) <sup>6</sup>	3
Credits	23.5
THIRD TERM	
Introduction to Genetic Counseling Thesis Research taught by Leila Jamal and Lori Erby (new course under review)	
PH.140.623Statistical Methods in Public Health III (elective)	4
PH.415.613 Introduction to Medical Genetics I (or 2 credits of Special Studies and Research "Medical Genetics for Genetic Counselors) <sup>2</sup>	2
PH.415.630Therapeutic Genetic Counseling I	2
PH.415.640 Health Judgment and Decision Making	2
PH.415.861 Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2
PH.415.870 Genetic Counseling Clinical Supervision	1
PH.415.851Supervised Clinical Rotations: Genetic Counseling	4
Credits	17
FOURTH TERM	
PH.415.650 Facilitating Family Adaptation to Loss and Disability I	2
PH.415.619New Genetic Technologies and Public Policy <sup>3</sup>	3
PH.415.675 Cancer Genetics: Managing the Risks Through Testing and Counseling	2
PH.415.614Introduction to Medical Genetics II (or 2 credits of Special Studies and Research "Medical Genetics for Genetic Counselors) <sup>2</sup>	2
PH.415.880Genetic Counseling Program Thesis Proposal Development I	2
PH.415.861 Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2
PH.415.870Genetic Counseling Clinical Supervision	1
PH.415.851 Supervised Clinical Rotations: Genetic Counseling (Total credits for 4th term: 18)	4
Summer	
PH.415.851 Supervised Clinical Rotations: Genetic Counseling (Total credits for 4th term AND	2
Summer: 20)	
Summer: 20) Credits	20

Introduction to Online Learning (non-credit) <sup>4</sup>	
Precision Health I - 1 credit (under development) <sup>5</sup>	
PH.415.631Therapeutic Genetic Counseling II	2
PH.415.881Genetic Counseling Program Thesis Proposal Development II	2
PH.415.861Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2
PH.415.870Genetic Counseling Clinical Supervision	1
PH.415.851Supervised Clinical Rotations: Genetic Counseling	4
PH.552.601Foundational Principles of Public Health (also offered 2nd and 3rd term) <sup>7</sup>	0.5
PH.552.607Essentials of Environmental Health (also offered 2nd and 3rd term) <sup>7</sup>	0.5
PH.552.612Essentials of One Health (also offered 4th term) <sup>7</sup>	0.5
PH.552.603The Role of Qualitative Methods and Science in Describing and Assessing a	0.5
Population's Health (take at least one qualitative course; also offered 2nd and 3rd term) <sup>7</sup>	
PH.550.604 Qualitative Reasoning in Public Health (take at least one qualitative course; also offered in 2nd term)	2
Credits	15
SECOND TERM	
Precision Health I - 1 credit (under development) <sup>5</sup>	
PH.410.710 Concepts in Qualitative Research for Social and Behavioral Sciences (take at least one qualitative course)	3
PH.550.604 Qualitative Reasoning in Public Health (take at least one qualitative course; also offered 1st term)	2
PH.415.651 Facilitating Family Adaptation to Loss and Disability II	2
PH.415.882 Genetic Counseling Program Thesis Proposal Development III	2
PH.415.861 Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2
PH.415.870 Genetic Counseling Clinical Supervision	1
PH.415.851 Supervised Clinical Rotations: Genetic Counseling (elective non-clinical rotation)	2
PH.552.610 The Social Determinants of Health (take this or Health Literacy; also offered 1st and 3rd term) <sup>7</sup>	0.5
PH.552.611Globalization and Population Health (also offered 1st and 3rd term) <sup>7</sup>	0.5
Credits	15
THIRD TERM	

PH.415.866Current Topics in Molecular Genetics I (elective) <sup>2</sup>	1
PH.415.840SS/R: Genetic Counseling	2
PH.415.861Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2
PH.415.870Genetic Counseling Clinical Supervision	1
PH.415.851Supervised Clinical Rotations: Genetic Counseling (Standardized Patient - Cancer)	4
PH.410.712 Theory and Practice in Qualitative Data Analysis and Interpretation for The Social and Behavioral Sciences (elective)	3 S
Credits	16
FOURTH TERM	
PH.415.867Current Topics in Molecular Genetics II (elective)	1
PH.415.619New Genetic Technologies and Public Policy <sup>3</sup>	3
PH.415.861 Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2
PH.415.870 Genetic Counseling Clinical Supervision	1
PH.415.851 Supervised Clinical Rotations: Genetic Counseling	4
PH.415.840SS/R: Genetic Counseling	2
Credits	13
Third Year	
FIRST TERM	
PH.415.701Genetic Counseling Lab I	2
PH.415.820Thesis Research: Genetic Counseling	4
PH.415.861Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2
PH.415.870Genetic Counseling Clinical Supervision	1
PH.415.851Supervised Clinical Rotations: Genetic Counseling	4
Credits	13
SECOND TERM	
Precision Oncology - 1 credit (under development) 5	
PH.415.702Genetic Counseling Lab II	2
PH.415.820Thesis Research: Genetic Counseling	8
PH.415.861Genetic Counseling Seminar: Topics in the Field <sup>2</sup>	2
PH.415.870Genetic Counseling Clinical Supervision	1
PH.415.851Supervised Clinical Rotations: Genetic Counseling	4
Credits	17
Total Credits	170

- <sup>1</sup> Fall semester course offered through the Johns Hopkins School of Education
- <sup>2</sup> FAES courses
- <sup>3</sup> Two courses alternate every other year: For the 2021-22 AY, PH 415.619 NEW GENETIC TECHNOLOGIES AND PUBLIC POLICY WILL BE TAUGHT. It alternates with PH 415.624 ETHICAL, LEGAL AND SOCIAL IMPLICATIONS IN GENETICS AND GENOMICS OVER TIME.
- <sup>4</sup> This non-credit, online mini-course **must** be completed before your second year so that you can take the 552 series online courses. It is *recommended for year 1, 3rd term*. You must enroll yourself. The course includes one mandatory LiveTalk session. See https://courseplus.jhsph.edu/core/index.cfm/go/course.home/cid/90/ to enroll.
- <sup>5</sup> Precision Health and Precision Oncology (under development) alternate every other year with 415.710/711 Medical Genomics and Genomic Medicine I/II.
- <sup>6</sup> For students taking the Counseling Theory course, it will be difficult to take Health Literacy during this term in the first year. Students can choose to take in the second year.
- <sup>7</sup> Enroll in 1-4 of the required half-credit PH classes listed in Year 2, which are offered in terms 1, 2 and 3.

PH.550.860 Academic & Research Ethics at JHSPH- Students must take this non-credit course upon matriculation

# Academic Advising

Students are assigned an Academic Advisor upon entry into the program. This individual is a member of the JHU/NIH GCTP Executive Committee. Students are expected to meet with the advisor at least once per semester, and often more frequently as outlined in the following Milestones Document. These meetings should be documented by a file saved by the student to the student's Microsoft Teams folder. Once a thesis advisor has been selected by the end of the first year, the student will submit an advisor change form through Susan Truitt so that the thesis advisor also becomes the academic advisor.

Meeting Dates	Task/Event	Key Deadlines	Date
			Completed
First Year			
Terms 1 and 2			
Before 3rd term	Academic Advisor Meeting		
egistration			
	Course Selections		
	Satisfactory academic progress		
Terms 3 and 4			
Before the end of	Academic Advisor Meeting		
the term			
	Course Selections		
	Satisfactory academic progress		
	Discuss potential thesis topics		
	Discuss thesis advisor choice (choose a second		
	advisor to serve as thesis advisor or use academic		
	advisor in both canacities)		
	Discuss summer internship/rotation plans		
Second Year			
Term 1			
Before 2nd term	Academic Advisor Meeting		
egistration			
	Course Selections		
	Satisfactory academic progress		
	Discuss potential thesis topics		
	Discuss thesis advisor decision		
At least twice	Thesis Advisor Meetings		
during the term	Discuss proposal draft progress		

Second Year (cont			
Term 2			
At least twice	Thesis Advisor Meetings		
during the term			
	Discuss proposal draft progress		
	Thesis Advisor meeting/phone call to discuss	The day before the	
	strategy for Executive Committee Meeting	Executive	
		Committee	
	Thesis Advisor attends the Executive Committee	Early-mid Dec	
	meeting		
	Thesis advisor meeting/call to plan for written	After the Executive	
	response to the Executive Committee	Committee	
		meeting	
Term 3			
At least once	Thesis Advisor Meeting		
during the term	_		
	Discuss proposal revisions and the written		
	response to the Executive Committee's concerns		
	response to the Executive committee 3 concerns		
	Discuss submission to the IRB		
	Monitor progress toward thesis timeline		
Term 4			
Before the end of	Academic Advisor Meeting		
the term during			
the term			
	Course selections		
	Satisfactory academic progress		
	Discuss summer internship/rotation/research		

At least once	Thesis Advisor Meeting	
during the term		
	Monitor progress toward the thesis timeline	
Third Year		
Term 1		
Before 2nd term	Academic Advisor Meeting	
registration		
	Course Selections	
	Satisfactory academic progress	
	Discuss potential career directions	
At least once	Thesis Advisor Meetings	
during the term		
	Monitor progress toward thesis timeline	
	Discus data analysis issues	
	Review thesis draft	
	Discuss thesis readers	
	Review student's poster for NHGRI research	
	retreat	
Term 2		
At least twice	Academic Advisor Meetings	
during the term		
	Satisfactory academic progress	
	Discuss job search	
	Thesis Advisor Meetings	
	Review written thesis document	
	Assist in preparation for final thesis seminar	
	Plan for publication	

# Academic due dates for the ScM

 $\frac{https://my.jhsph.edu/Offices/StudentAffairs/RecordsRegistration/MastersCandidateInformation/Documents/Due%20DatesScM%20MBe%20and%202021.22.pdf$ 

Requirement	Due Dates for	Due Dates for	Due Dates for
	Summer Conferral	Fall Conferral	Spring Conferral May
	August 27, 2021	December 31, 2021	26, 2022
Student has:	Friday	Friday	Friday
Verified with their	June 11, 2021	October 15, 2021	February 11, 2022
Academic			
Coordinator that all			
academic			
requirements for the			
degree (except for			
submission of the			
thesis) have been			
fulfilled.			
Student has	Friday	Friday	Friday
submitted:	June 18, 2021	October 29, 2021	March 18, 2022
Appointment of			
Thesis Readers Form			
to the Office of			
Records &			
Registration.			
Student has	Friday	Friday	Friday
submitted:	August 27, 2021	December 17, 2021	May 6, 2022
Thesis acceptance	*Note: Summer 2021		
letters to the Office of	enrollment is not		
Records &	required if completion		
Registration and	is after May 20, 2021		

approval of electronic		
copy of thesis		
submitted to		
Sheridan Library:		
http://etd.library.jhu.		
edu		

For a student planning for a spring conferral, the NIH traineeship runs through January 31, 2022. The deadline to submit all thesis documents and letters to avoid paying third term tuition is Friday, February 4, 2022.

# The Johns Hopkins University / National Institutes of Health Genetic Counseling Training Program

National Institutes of Health 10 Center Drive Building 10, Room 8D54A Bethesda, MD 20814

### **Program Director**

Lori Erby, Ph.D, ScM (301) 443-2635

#### **Academic Director**

Debra Roter, Dr.PH (410) 955-6498

# **Genetic Counseling Sc.M. Thesis Guidelines**

The thesis prepares students for conducting research as a genetic counselor. It must be original, feasible and likely to make a worthwhile contribution to the practice of genetic counseling, culminating in a publishable paper. An oral presentation of the thesis proposal followed by a written examination assessing students' research knowledge constitutes the Department of Health, Behavior and Society's comprehensive examinations for the Sc.M. degree.

PART 1: THESIS PROPOSAL DEVELOPMENT AND COMPREHENSIVE EXAMINATION (Years 1 and 2)

# **Developing a Thesis Idea**

Students develop ideas for theses in a variety of ways. Some students come to the program with research ideas. Others may recognize gaps in the professional literature in their classroom work or in working clinically with families, or a research idea may emerge from learning about faculty research interests. Finally, students may develop their own independent idea for a study. In the first year, the third term Introduction to Genetic Counseling Research ("Research Tapas") class is intended to expose students to a variety of researchers from both institutions to facilitate this process.

# Scope of Work

Student projects may involve asking your own independent question or collaborating with existing faculty on a novel project. The thesis may incorporate one or several of the following: primary data collection and analysis, secondary data analysis, quantitative methods, and qualitative methods. The thesis may fall within various disciplinary areas related to genetic counseling including: health communication, genetic counseling outcomes, implementation science, behavioral economics, health services research, counseling psychology, and ethical/legal/social issues.

# **Research Expenses**

Students have a budget of up to \$5,000 for their research and are expected to track their expenses and not exceed this allotment. These funds are part of the program's research budget, and charges are made (with permission) to the program's account via an administrator, such as the program coordinator. On occasion thesis advisors have other sources of research money that can be spent on student research. A budget proposal is due to program leadership at the time of IRB submission.

#### Thesis Committee Selection

There are four levels of involvement a faculty member or other mentor may have in a student thesis project: 1) Advisor of Record, 2) Committee Member, 3) Collaborator and 4) Thesis Reader. Students select their own thesis committees and collaborators with guidance from the research advisor. However, Executive Committee faculty members often make suggestions to students.

- 1. Thesis Advisor of Record: The student's thesis advisor of record is the primary mentor for a student's thesis project. All decisions about a student's thesis topic, proposal, committee composition, involvement of collaborators, study execution, selection of readers, and manuscript preparation must be agreed upon by the student and their advisor. The following individuals are eligible to be primary advisors for a student thesis project: Lori Erby, Kathy Helzlsouer, Leila Jamal, Cynthia James, Bill Klein, Jill Owczarzak, Debra Roter, and Julie Sapp. Students should note that most of these advisors will not have the bandwidth to work with more than one student in a given cohort.
- 2. Thesis Committee Members: Thesis committees consist of two to three faculty members (including the advisor) selected because they are interested in the topic and are able to provide substantive assistance to the student in developing and carrying out the project. At least two members of the thesis committee (including the advisor) should be members of the Executive Committee (ideally, one from NIH and another from JHU). Current Executive Committee members include; Sara Benjamin-Neelon, Les Biesecker, Joann Bodurtha, Megan Cho, Julie Cohen, Lori Erby, Kathy Helzlsouer, Leila Jamal, Cynthia James, Donna Krasnewich, Bill Klein, Howard Levy, Jill Owczarzak, Debra Roter, Julie Sapp, and Chuck Venditti. Additional investigators who have served on committees include: Mary Catherine Beach, Benjamin Berkman, Vence Bonham, Janice Bowie, Kathy Calzone, Megan Frone, Katie Lewis, Ellen MacNamara, Debra Mathews and Susan Persky. Any experienced investigator at NIH, Johns Hopkins, or outside institutions is potentially eligible to serve as a committee member please consult with your thesis advisor for further guidance about this.

- 3. Thesis Collaborators: Thesis collaborators are additional research mentors who may be faculty members at Johns Hopkins (including outside HBS), the NIH, or outside institutions. They may also be genetic counselors, other clinicians, patient advocates or representatives of communities for whom a student's research is relevant. While collaborators are NOT eligible to be thesis readers, they may provide substantive input on a thesis project and may be co-authors on any resulting publications. They are not expected to meet with the student as frequently as a committee member might, and their role is often a bit circumscribed (for instance, assistance with recruitment). However, it is VERY important to negotiate with your thesis collaborators about their level of involvement, their desire to see abstracts and presentations for feedback, and their expected timelines for providing feedback.
- 4. Thesis Readers: Discussed here.

# **Thesis Proposal Development**

Building on knowledge previously obtained in 410.615.01 "Research Design in the Social and Behavioral Sciences", the thesis proposal development course taught by Dr. Debra Roter with the assistance of Chenery Lowe in the fourth quarter of the first year and first and second quarters of the second year assists students in preparing a thesis proposal that addresses a significant problem in the field of genetic counseling and makes an original contribution to the literature. It is also prepares students to present and defend the proposal to the Executive Committee. Students will also discuss the nature and content of the written exam.

# **Oral Presentation Process and Expectations**

The purpose of the oral presentation is two-fold: 1) To provide students with the opportunity to present their research plan to the Executive Committee, demonstrate their knowledge of research design, and discuss the decisions they made in their proposals and 2) To provide the Executive Committee with an opportunity to provide feedback on the proposals to help improve students' plan of work.

Students are expected to turn in a polished version of their current proposal two weeks prior to their scheduled oral presentation. The oral presentation will be scheduled for one hour. During that time, the student is expected to prepare a 10 minute PowerPoint overview of their project and to respond to questions from four designated questioners from the Executive Committee.

Executive Committee members are expected to provide written feedback on the proposal to each student's advisor no later than 48 hours before the oral presentation so that students can consider/incorporate that feedback.

After the oral presentation, each student and advisor will receive final feedback about the proposed project. Each thesis advisor will consolidate the feedback and work with each student to provide a concise 1-2 page written response to feedback, to be submitted as soon after the oral presentation as possible and prior to IRB submission. This written response is meant to mirror the typical scientific review process at the NIH (and many other academic institutions) and is distinct from the Written Exam described below.

#### Written Exam Process and Evaluation

The written examination will be distributed to students after satisfactory completion of the oral presentation (usually in early January). Students will have two weeks to complete the written exam.

The written exam consists of five questions intended to assess students' understanding of research design and translation. Students will select three articles from a list of articles curated by program leadership. The exam will be answered with reference to these articles. The exam will cover competencies in both qualitative and quantitative research, such as:

- 1. Research design, guestion development, and recognizing a gap in the literature
- 2. Strengths and weaknesses of different sampling approaches
- 3. Threats to internal/external validity and how these are handled similarly or differently in different types of research
- 4. Inferring implications and next additional research questions from study findings
- 5. Using conceptual frameworks in research

The written exam will be graded according to a rubric by members of the Executive Committee within two weeks of being completed by the student. After passing the written exam, a student may submit their research protocol to the Institutional Review Board for review (see IRB Guidance here).

# Quick Reference: ScM Thesis Proposal Development - Milestones and Deadlines

Milestone	Deadline
Develop a logbook of research ideas	End of 3rd Term of First Year (as part of "Research
Meet with at least two potential advisors and	Tapas")
committee members	
Complete Welch Informationist Training	
Identify a topic and thesis advisor	End of 4th Term of First Year (as part of "Thesis
	Proposal Development I")
Submit a specific aims summary including aims,	Mid-July between First and Second Years
questions, proposed methods, and a justification	
supported by literature to Executive Committee	
Incorporate Executive Committee feedback	Late Summer/Early Fall of Second Year
Submit full proposal to Executive Committee	Late October-Mid-November of Second Year

Mock oral presentation	Late October-Early November of Second Year
Oral presentation to Executive Committee	Early November-Mid-December of Second Year
Written examination	Due Over Winter Break
Submit IRB application (if applicable)	Third Term of Second Year
Begin data collection/study execution	Third/Fourth Term of Second Year

# PART TWO: CONDUCT AND WRITEUP OF Sc.M. THESIS RESEARCH

After passing your written examination, you will be eligible to submit your proposal to the Institutional Review Board (IRB) for approval (if applicable). For specific guidance about the IRB review processes at Johns Hopkins and NIH, please refer to the IRB Guidance Document.

# **Conducting Research**

After receiving notice of IRB approval, students will begin conducting their research using the procedures outlined in their study protocol. This work should begin by the fourth quarter of their second year in the program.

Students are expected to finish data collection by the **end of the summer heading into the third year (or earlier if possible).** It is a good idea to set up recurring meetings with your thesis advisor and/or committee members throughout the summer between your second and third years. While you may also pursue an optional summer clinical rotation between your second and third years, it is important to make sure you carve out a significant bulk of time to work on your thesis during your second summer in the program.

#### Research Software

#### **Statistical Software**

STATA or R are the statistical analysis software packages you will become familiar with as part of the Biostatistics 620 course series in your first year of the program. For this reason, most students prefer to use one of these. Please discuss your data analysis plan with your advisor well ahead of analyzing your data to ensure that you have access to the correct software package. STATA and R are available via Johns Hopkins SAFE Desktop, which a Johns Hopkins member of your committee can set up for you.

# **Qualitative Analysis Software**

MaxQDA is the preferred qualitative analysis software for students conducting qualitative research. You will become familiar with MaxQDA during "Theory and Practice in Qualitative Data Analysis and Interpretation" (Course # 410.712.01) in the third term of your second year. NIH owns several MaxQDA licenses which you can use.

If you prefer to use a different qualitative analysis software package, you may discuss this with your advisor. NVivo is available via the Johns Hopkins SAFE Desktop and the NIH may also be able to acquire an NVivo license for you.

# **Qualtrics and RedCap**

Qualtrics and RedCap are the two survey platforms available to students via Johns Hopkins. Most previous students have used Qualtrics.

# Other Software - Inquire

Students who need other software platforms for their projects should contact Dr. Lori Erby for guidance about additional options. It is best to start that conversation as early as possible, and certainly by the early summer.

#### IRB Guidance and Best Practices for Data Collection

Further FAQs and a guide to the Johns Hopkins Bloomberg School of Public Health's IRB review process can be found <a href="https://example.com/here">here.</a>. Occasionally, students may find that it makes sense to use the NIH IRB or other Johns Hopkins IRBs. Students should work with their advisors to determine which IRB is most appropriate for submission.

#### **Thesis Format**

Students can choose between a publishable manuscript or a traditional thesis format. For **either** format, the following are necessary components of the write-up: 1) abstract; 2) an introduction section in which the background literature is completely summarized, the objectives of the study made clear (with or without hypotheses), and a rationale for the study and its design provided; 3) a methods section completely describing what was done, to whom it was done and methods of data analysis; 4) a results section; 5) a discussion/conclusions section indicating what was learned from the study in terms of the overall objectives and hypotheses, how the findings support or contradict published findings, and what the findings contribute to the field of study; and 6) the implications of the findings for the field of genetic counseling and ideas for future research.

For the manuscript style, a more extensive literature review is expected than what is typically included for a publication and may require a separate longer introductory chapter prior to the manuscript that has been prepared, but otherwise the format is streamlined and in the format and size for publication. The student should work directly with his or her advisor on the specific chapters to include, but it is often helpful to have an initial chapter that describes the aims of the larger work and introduces the manuscript, the manuscript itself, and a final discussion chapter that goes a bit beyond what may have been presented in the more streamlined manuscript (often focusing more fully on practice implications). The Bloomberg School of Public Health has guidelines dictating submission and layout of the thesis, title page, acknowledgements, table of contents, etc. that students need to obtain here and here.

#### Thesis Readers

Students need two thesis readers to approve their thesis. The request for the appointment of thesis readers should be submitted to the HBS Academic office at least **four** weeks prior to the expected completion date. However, for a December degree conferral, this must be done by the end of first quarter (please refer to the "Due Dates" document. **The aim is to choose a second reader who is already a thesis committee member as often as you can.** Early identification of readers and discussion with those not on the thesis committee is encouraged during thesis preparation.

The Bloomberg School of Public Health guidelines for thesis readers states that readers must meet the following criteria:

- 1. the readers must consist of **two voting members**; one of which is the student's advisor of record.
- 2. the second member must be a full-time (professor, scientist, lecturer, instructor of any rank), emeriti, or adjunct faculty from any JHSPH or JHU department, including but not limited to HBS. This individual may not be a visiting faculty member.

3. only one adjunct faculty member may serve on the committee of thesis readers. If the advisor of record is an adjunct faculty member, the second reader may not be.

The student's thesis advisor must serve as a member of the readership. The thesis advisor may be from the National Institutes of Health with an adjunct appointment in HBS. Although one reader may be adjunct faculty, a second may be added only by way of a waiver signed by Senior Associate Dean for Academic Affairs. Because this waiver is at the Dean's discretion, a student who wants to have two adjunct faculty members to serve as readers should allow time to petition the Dean. Thesis forms may be accessed <a href="here">here</a>.

Your advisor should have an opportunity to comment on your full thesis draft before you send it to your readers. After that readers need at least two weeks to review and approve the thesis. Many times there will be suggested revisions to be made with the counsel of the advisor. Please allow time to enter these comments prior to your submission deadline.

#### **Final Thesis Submission and Approval**

Once approved, the readers each write a letter indicating their approval to the Office of Records and Registration. Students then need to electronically submit their thesis following the previously mentioned guidelines. After the thesis has been approved by the Eisenhower Library at Johns Hopkins, students should email the .pdf of the thesis along with the completed "Dissertation/Thesis Information Form for Bound Department Copy" to Robin Newcomb at <a href="mailto:rnewcomb@jhmi.edu">rnewcomb@jhmi.edu</a>. HBS will pay for the departmental copy, if required. Students must then upload the .pdf at thesisondemand.com and purchase a bound copy for NIH. Students may also order additional copies at their discretion. Many students will purchase a copy for their advisor as well. Students must register for a minimum of two credits during the quarter in which they anticipate completing the degree program. Given this requirement, if they are not finished by the end of second quarter, they must register for the third quarter. Note that it is possible to extend the deadlines to the last day of the add/drop period for third quarter without having to pay third quarter tuition.

Additional information about submitting an Sc.M. thesis can be found here.

Given that some states now require a diploma to receive temporary licensure, we are strongly encouraging that students plan for a **December** degree conferral. As per the "Deadlines and Milestones" grid below, this requires that thesis letters and an approved electronic copy of the thesis has been submitted by the last day of second term. Students should check the precise due dates with Robin Newcomb in the Department of Health, Behavior, and Society at the start of the first term of third year.

In addition to following the instructions outlined in the previously mentioned links, students should submit a pdf of the final document to Robin Newcomb in HBS.

#### **Final Thesis Seminar**

During **January of the third year** of graduate studies, the student presents a scholarly seminar that includes the aims, methodology, findings, and discussion of their thesis research. This formal NIH seminar is required. A similar seminar presentation at Johns Hopkins is optional. Faculty and students are invited to

attend. Traditionally, these seminars take place as part of the NIH GCTP graduation ceremony in January. Students are required to submit PowerPoint slides and to schedule a practice run-through of the final seminar with the advisor and/or program leadership at least 5 days before graduation is to take place.

# Quick Reference: ScM Thesis Completion - Milestones and Deadlines - CHECK WITH OFFICE OF RECORDS AND REGISTRATION (Robin Newcomb) FOR SPECIFIC DATES EACH YEAR

Milestone	Deadline
Submit your graduation application to Robin	Mid-October of third year
Newcomb in the Office of Records and	·
Registration	
Submit Thesis Readers Form (identifying your two	Mid-October of third year
readers) to Office of Records and Registration	·
Submit Final Thesis Draft to Readers (after your	Mid November/Early December of third year
thesis advisor has signed off on it)	
Thesis Readers Form Due to Office of Records	Mid-December of third year
and Registration	·
Final Electronic Copy of Thesis (with correct	Mid-December of third year.
formatting) Due to Sheridan Library	-

# JHU/NIH Genetic Counseling Training Program (GCTP) <u>Thesis Action Timeline</u>

Refer to the JHU/NIH GCTP "Thesis Guidelines and Timeline" document for more detailed information.

Topic/Action Item	General Due Date	Specific AY Due Date: 2021-2022	Date Done ✓	Key Contact(s)	Notes/Comments
FIRST YEAR					
Students take "research tapas" course in 3 <sup>rd</sup> quarter and "proposal development" in 4 <sup>th</sup> quarter	Per class instructors			Debra Roter, Lori Erby	Plan is to introduce 1 <sup>st</sup> year students to thesis development before their 4 <sup>th</sup> quarter if possible. Debra Roter & Lori Erby manage this.
Select Thesis Advisor	May			Debra Roter, Chenery Lowe	
SECOND YEAR					
Select Thesis Committee	Sept early Oct.			Debra Roter, Chenery Lowe	Students select their own thesis committees. However, Executive Committee faculty members often make suggestions to students. Thesis committees comprise about two to three faculty members selected due to interest in the topic and ability to provide substantive assistance to the student in developing and carrying out the project. At least two members of the thesis committee (including the advisor) should be members of the Executive Committee (ideally, one from NIH and another from JHU).
Submit draft thesis proposal to <b>Thesis</b> Committee	End of October	10/25/2021		Thesis Committee; Advisor	The proposal should be written in the "New Applications (PHIRST)" format required by the JHSPH IRB, available at: <a href="https://www.jhsph.edu/offices-and-services/institutional-review-board/applications-and-forms/new-applications-phirst/index.html">https://www.jhsph.edu/offices-and-services/institutional-review-board/applications-and-forms/new-applications-phirst/index.html</a>
Comments from Thesis Committee	Mid Nov.			Advisor	
Send thesis proposals to Executive Committee	Mid to late November latest	11/17 Week 1 11/24: Week 2		Debra Roter & Advisor	Exec. Committee members must receive final draft thesis proposals at least two weeks in advance of the early to mid December oral presentations at JHU or NIH. Exec. Committee reviewers write up critiques prior to the student's oral presentation. The format used for written critique is that of the NIH Scientific Review Committee. All critiques are sent to the student's thesis advisor who, prior to the oral examination, compiles them into one document to guide the student's preparation for the discussion. It is expected that

Topic/Action Item	General Due Date	Specific AY Due Date: 2021-2022	Date Done ✓	Key Contact(s)	Notes/Comments
					most students will follow a timeline that allows for completion of the exam on one of the two pre-selected December dates.
Mock Oral Presentation	Late November	TBD		Debra Roter, Chenery Lowe	Each student will be asked to give a 10-minute presentation on an overview of their proposed research (just as in the Executive Committee) and respond to round-robin questions from Debra, Chenery, other faculty and classmates about the proposed research. Each student will be allotted approximately 45 minutes of question time. This occurs during Debra Roter's 2 <sup>nd</sup> term course: Protocol Development in Genetic Counseling Research III
Oral Presentations	December	<b>12/1</b> : remote <b>12/8</b> : remote		Debra Roter, Chenery Lowe	Some students (about ½ of class) present Week 1; remaining present at Week 2.
Project Presentation in GC Seminar	Mid December	12/15		Debra Roter, Lori Erby	Take place at NIH on Fridays.
Written Exam & response to questions - See "Notes/Comments"→	January (end January latest)			Advisor; Exec. Committee reviewers	Between the oral presentation and the second week of January, the students will complete a written comprehensive exam consisting of five questions intended to assess students' understanding of research design and translation. Students will select three articles from a list of articles curated by program leadership. The exam will be answered with reference to these articles. The exam will cover competencies in both qualitative and quantitative research, such as:  1. Research design, question development, and recognizing a gap in the literature 2. Strengths and weaknesses of different sampling approaches 3. Threats to internal/external validity and how these are handled similarly or differently in different types of research 4. Inferring implications and next additional research questions from study findings 5. Using conceptual frameworks in research The student will have 2 weeks to complete the written response to this document. The written exam will be graded according to a rubric by members of the Executive Committee within two weeks of being completed by the student.
Conditional Pass - Submit revision	March 15				When a Conditional Pass has been assigned, the Executive Committee will determine the specific conditions and communicate them to the student and the student's advisor.

Topic/Action Item	General Due Date	Specific AY Due Date: 2021-2022	Date Done ✓	Key Contact(s)	Notes/Comments
					Typically this means re-writing responses to the poorly scored question(s). The re-take must be completed prior to the end of 3rd term, and the rewritten question(s) must receive a score of 1 or 2 to be considered a passing exam. Students who fail the exam after a Conditional Pass re-take of a subset of the questions will have to re-take a new version of the exam during fourth term.
Failed Student – Submit plan for retake	March 15 – submit plan				If a student fails the written exam, the student will be required to retake the exam with a new selection of articles. A student receiving a fail on the initial exam will be required to meet with his/her advisor and develop a plan of action for preparing to retake the exam. The plan, signed by both the student and advisor, will be sent to the Executive Committee no later than the end of third term. Only one complete reexamination is permitted. The reexamination follows the same criteria for assessment as the first exam. Failure to obtain approval at this time results in a failure of the comprehensive examination, and the student may be asked to leave the program.
IRB Submission	Jan. – April, as applicable			Lori Erby/NIH; Debra Roter/JHU	Following completion of the comprehensive exam and approval of the thesis proposal by the student's thesis committee, the student submits the protocol for IRB review. Most students will submit for review to the JHSPH IRB using the PHIRST system and following guidelines on this website:  https://www.jhsph.edu/offices-and-services/institutional-review-board/index.html  Note the tab to the left for "Student Projects."  Refer to the IRB Guidelines document for specific details and deadlines.  Prior to submission to the IRB, the student must obtain approval of the protocol from her/his thesis advisor AND the PI on the IRB protocol. The advisor and PI should be given 7-10 days minimum to review the materials. The entire IRB review process may take as many as 8-10 weeks. The student submits his/her protocol to additional IRBs of collaborating institutions as necessary.  The IRB office will often ask additional questions that need to be addressed prior to review. Any changes made in response to these requests need to be approved by the thesis advisor AND PI before submission.

Topic/Action Item	General Due Date	Specific AY Due Date: 2021-2022	Date Done ✓	Key Contact(s)	Notes/Comments
					NIH IRB submission is required if thesis involves NIH subjects –
					see Thesis Guidelines for brief NIH IRB submission information.
Thesis Research	After initial IRB			Melissa J. Cooke	Link for form: https://www.jhsph.edu/offices-and-
Documentation Form	approval			Academic Affairs Executive	services/institutional-review-board/ pdfs-and-
	obtained			Assistant	docs/Thesis%20Form 07Mar2017.pdf
				Johns Hopkins University	
				Bloomberg School of Public Health	Sample email letter to students from Melissa Cooke:
				615 N. Wolfe Street, Rm W1513	"You passed your Comprehensive Exam on XXXX. By this time, your
				Baltimore, Md 21205	Thesis Advisory Committee should be formed and documented as
				410-955-3348	directed by your department. It is your responsibility to ensure
				mjcooke@jhu.edu	that you obtain the necessary research approval (either IRB for
				www.jhsph.edu	human subjects research or ACUC for animal research) on the
					appropriate approved protocol(s). Retroactive research approval
				L. Robin Newcomb for	for research involving human subjects and/or animals cannot,
				"Academic Coordinator"	under any circumstance, be granted. Failure to obtain research
				signature	approval will prevent you from publishing your thesis/dissertation.
					The following resources on obtaining research approval are
					provided for your reference:
					Human Subjects: http://www.jhsph.edu/offices-and-
					services/institutional-review-board/student-projects/policies-for-
					students/
					Animals Research: <a href="http://web.jhu.edu/animalcare">http://web.jhu.edu/animalcare</a>
					The attached form must be completed and returned to the Office
					of Academic Affairs (W1513) by XXXX. The attached form is a PDF
					fillable form which can be completed electronically and e-mailed
					or hand delivered to W1513."
					Note: This form documents a student's IRB/ACUC approval and is
					signed by both the student advisor and the academic coordinator
					(for GCs, L. Robin Newcomb). The form must either be returned to
					Office of Academic Affairs in W1513 <u>or</u> sent electronically to
					Melissa Cooke (mjcooke@jhu.edu) so that it may be placed in the
					student's academic file.

Topic/Action Item	General Due Date	Specific AY Due Date: 2021-2022	Date Done ✓	Key Contact(s)	Notes/Comments
Budget	Jan-Apr			NIH Program Coordinator – Maddie Piper	After submission to IRB, submit a proposed budget to Lori Erby, copying Maddie Piper. This will facilitate purchasing. Although purchases cannot be made until IRB approval has been obtained, it is helpful for Maddie to have this information as early as possible.
Collect data	Summer			Advisor	During the data collection phase, the student should keep her/his thesis advisor aware of progress and obstacles by meeting at least every other week.
					Students have a budget of \$5,000 for their research and are expected to track their expenses and not exceed this allotment.
THIRD YEAR					
Finish data collection	Sept			Advisor; Statistician	Per current Thesis Guidelines and Timeline: Students are strongly encouraged to have completed data collection by the start of their third year in the graduate program.  Students are to also keep other members of their thesis
					committees apprised of the status of the project. Data need to be properly stored according to the IRB guidelines. The student does data entry and analysis. Advice about, and confirmation of, data output can be sought from a statistician through JHSPH (Brian Weir). <a href="mailto:bweir3@jhu.edu">bweir3@jhu.edu</a>
Thesis Research Documentation Form*	Refer to 2 <sup>nd</sup> Year			Melissa J. Cooke Academic Affairs Executive Assistant Johns Hopkins University Bloomberg School of Public Health 615 N. Wolfe Street, Rm W1513 Baltimore, Md 21205 410-955-3348 mjcooke@jhu.edu www.jhsph.edu	*If not yet submitted during 2 <sup>nd</sup> year. See notes above under Second Year for detailed information.
Submit thesis readers' names via signed/dated thesis reader form to JHU	Oct-Nov	10/29/2021 – for December degree		1) For <u>initial review</u> of form regarding two thesis readers:	1)The JHU Academic Administrator (L. Robin Newcomb) will sign/date it.
Office of Registration and		conferral		Primary: L. Robin Newcomb (AC)	2)After the AC signature/date showing review, student must obtain <i>all</i> dated signatures on the <i>bottom part</i> of the form (p. 2), <i>except</i>

Topic/Action Item	General Due	Specific AY	Date	Key Contact(s)	Notes/Comments
	Date	Due Date:	Done	, ,,	,
		2021-2022	✓		
Records* – See		~11/3/2021 -			the Associate Dean, prior to email submission (preferable) to the
"Notes/Comments" →		May degree		2) For <u>submission</u> of form*:	JHU Office of Records and Registration. Edda Budlow (Graduate
		conferral			Records Coordinator) is the primary contact for this; Leslie Nicotera
				Primary: Edda Budlow	(Director) is the secondary contact in Edda's absence.
		(no later than		Secondary: Leslie Nicotera	
		3/18/2021,			HBS Dept. Chair (for signature): Dr. Rajiv Rimal – copy Steven
		even if			Montera, Dr. Rimal's administrative assistant & Robin.
		completing			
		thesis after			*Important note for any student who received a "Conditional Pass"
		that date)		Laut Fuhru fan ianuina a fannal	for her/his theses – The student must <b>provide the specific date</b>
				<b>Lori Erby</b> for issuing a formal memo documenting that a	that he/she passed the written exam to Edda Budlow (or Leslie Nicotera in Edda's absence). Then a <i>formal memo from the</i>
				student passed exams if student	department should be forwarded to Edda (from Lori Erby or
				received a "Conditional Pass"	designee). Edda is unable to process the thesis reader form
				on exam	without this information. Edda will hold processing of the student's
				on exam	thesis readers' form until she receives a memo from the
					department that confirms the student passed, with the date. Once
					she receives that memo, she will put a note on the student's
					transcript.
Submit abstracts & present	Sept/Oct			Lori Erby	
posters at NHGRI					
symposium					
Send final thesis to readers	Fall Conferral: 1st	11/30/21			Fall/Dec. Conferral – 11/20/21 recommended; 1st week Dec. latest;
	week Dec. latest				see immediately below
					Contrar and Country No. 1-4-1-4 have been seen as 40
	Spring conferral:	1/10/22			Spring conferral: No later than January 18
	~ January 15	1/18/22 (Spring			
		conferral)			
Deadline for readers'	Fall/Dec.	12/17/2021		Edda Budlow; Leslie Nicotera	For <b>fall</b> graduation, the deadline for submission of reader letters
letters to Registrar's office;	conferral: ~ Mid	12/1//2021		Lada Badiow, Lesiic Medicia	and all grades is the end of 2 <sup>nd</sup> quarter (for AY 2021-22 year that is
.pdf of thesis uploaded to	to end December			Advisor	December 17 <sup>th</sup> ).
Eisenhower Library (& last					Per current Thesis Guidelines:
day of add/drop for third	Spring conferral:			L. Robin Newcomb - Students	Please note that the "Due Dates" document on that site provides a
quarter)*	~ Feb. 1	2/01/22		should submit a pdf of the final	helpful list of tasks but with two sets of dates. Students in our
		(officially		document to L. Robin Newcomb	program have the option of either a December conferral or a May
		2/4/22		(Academic Administrator) in	conferral. Historically, most students have chosen to have a May
		LATEST)*		HBS. Ms. Newcomb will also	degree conferral, but have completed the thesis such that they do

Topic/Action Item	General Due Date	Specific AY Due Date: 2021-2022	Date Done ✓	Key Contact(s)	Notes/Comments
				provide a form to complete to facilitate thesis binding.	not have to pay tuition for third or fourth terms during their third year. Given that some states now require a diploma to receive temporary licensure, we are strongly encouraging that students plan for a December degree conferral. As per the "Due Dates" document, this requires that thesis letters and an approved electronic copy of the thesis has been submitted by the last day of second term. Students should check the "Due Dates" document specific to their year of graduation for the specific date.  The last possible date for submission of the thesis and thesis letters for a spring degree conferral is May 6, 2022.  *Summary: Since some states that require proof of completion of the ScM before a GC is allowed to see clients, these timeline dates are based on a December conferral, unless a student needs an extra month for writing and analysis. This would allow the student to take advantage of the winter break and 3rd quarter add/drop period to avoid paying 3rd quarter tuition.  Students do NOT need to register for the third term in this case,
					but would be required to register and pay a late fee if they miss the add/drop deadline.
Present thesis in graduation ceremony at NIH	January	1/21/2022		Advisor; Lori Erby	Per current Thesis Guidelines: Each student "presents a seminar that includes the aims, methodology, findings, and discussion of their thesis research. A formal NIH seminar is required. A similar seminar presentation at Johns Hopkins is optional. Faculty and students are invited to attend."
Transcripts & Certified Letters	January/February			Edda Budlow, Records & Registration	Transcript Information: https://www.jhsph.edu/offices-and-services/student-affairs/records-and-registration/transcripts.html  Letter from Registrar (usu. Edda Budlow) confirming graduation, even if Spring conferral, for those who need this for jobs: Edda will process a certified letter and send it electronically to each student requesting it.
Submit abstract to NSGC & submit thesis for publication	Upon graduation			Advisor	Per current Thesis Guidelines: "You are expected to share your research on a national level upon graduation. This includes submitting an abstract to NSGC and submitting your thesis for publication. Upon graduation, you should have a longitudinal plan

Topic/Action Item	General Due	Specific AY	Date	Key Contact(s)	Notes/Comments
	Date	Due Date:	Done		
		2021-2022	✓		
					laid out with your advisor for which journal you are targeting, which aspect of your research you plan to write up and a general timeline."  "Monitor the NSGC website for the Annual Conference abstract deadline (occurs very early) and plan to have your abstract ready one MONTH prior to the deadline. First send the abstract to your thesis advisor for feedback and follow up with him/her as necessary."  "Edit your draft based on that feedback. Then, send the document to all co-authors for input and approval. Co-authors must approve any presentation or publication and please avoid sending it to them at the last minute."

\*\*\*\*\*\*\*\*\*\*\*\*\*

# Helpful Thesis Links

#### JHSPH:

#### JHSPH "Masters Candidate Information":

https://my.jhsph.edu/Offices/StudentAffairs/RecordsRegistration/MastersCandidateInformation/Pages/default.aspx

#### JHSPH Guidelines - Thesis:

https://www.library.jhu.edu/library-services/electronic-theses-dissertations/

https://www.library.jhu.edu/library-services/electronic-theses-dissertations/formatting-guidelines/

#### Thesis reader form:

https://my.jhsph.edu/Offices/StudentAffairs/RecordsRegistration/MastersCandidateInformation/Documents/ScM%20-%20MBe%20Appointment%20of%20Thesis%20Readers%20Form.pdf

Students can check faculty appointments by accessing: https://www.jhsph.edu/faculty/directory/list/

JHSPH Thesis Research Documentation Form: <a href="https://www.jhsph.edu/offices-and-services/institutional-review-board/">https://www.jhsph.edu/offices-and-services/institutional-review-board/</a> pdfs-and-docs/Thesis%20Form 07Mar2017.pdf

JHSPH IRB: https://www.jhsph.edu/offices-and-services/institutional-review-board/

JHSPH PHIRST: Access it by clicking on the PHIRST Access link box in the top left corner here: <a href="https://www.jhsph.edu/offices-and-services/institutional-review-board/phirst/">https://www.jhsph.edu/offices-and-services/institutional-review-board/phirst/</a>. Right below that access link is a newly created user guide. Submit all study actions (amendments, progress reports, etc.) for existing studies after you've activated them. Activation instructions: <a href="https://www.jhsph.edu/offices-and-services/institutional-review-board/">https://www.jhsph.edu/offices-and-services/institutional-review-board/</a> pdfs-and-docs/PHIRST CompleteShellsGuide 2019-12-10.pdf.

JHSPH IRB New Applications (under PHIRST): <a href="https://www.jhsph.edu/offices-and-services/institutional-review-board/applications-and-forms/new-applications-phirst/index.html">https://www.jhsph.edu/offices-and-services/institutional-review-board/applications-and-forms/new-applications-phirst/index.html</a>

JHSPH PHIRST 2.0 FAQs: <a href="https://www.jhsph.edu/offices-and-services/institutional-review-board/">https://www.jhsph.edu/offices-and-services/institutional-review-board/</a> pdfs-and-docs/PHIRST%20FAQS 12Nov2019.pdf

JHSPH IRB Student Manual: https://www.jhsph.edu/offices-and-services/institutional-review-board/ pdfs-and-docs/Student%20Manual V22 25Sep2019.pdf

### NIH:

#### NIH IRB, electronic iRIS website:

https://irbo.nih.gov/confluence/display/IRBO/Templates+Forms+and+Guidelines#TemplatesFormsandGuidelines-Templates

https://irbo.nih.gov/confluence/display/IRBO/NIH+iRIS

Office for Human Research Protections (OHRP): https://www.hhs.gov/ohrp/

 $\label{eq:protection} \begin{array}{l} \textbf{Protection of Human Subjects-45CFR46:} & \underline{\text{https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=\&SID=83cd09e1c0f5c6937cd9d7513160fc3f\&pitd=20180719\&n=pt45.1.46\&r=PAR} \\ \underline{\text{T\&ty=HTML}} \end{array}$ 

# NIH Definition of Human Subjects Research & Related Infographics:

https://grants.nih.gov/policy/humansubjects/research.htm