

# OSU GENETIC COUNSELING GRADUATE PROGRAM

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## COURSEWORK WITH SYNOPSIS

### AUTUMN SEMESTER YEAR 1

#### **INTMED7000 Foundations in Medicine I (2 credits)**

Normal human systems and pathophysiology needed for the practice of genetic counseling and working with a healthcare team. This course covers cell biology, tumor biology, and metabolism, musculoskeletal, skin, reproductive, and cardiovascular systems. One hour a week of this course includes a practice based or case-based learning approach which will be in alignment with the content delivered in INTMED7020 and INTMED7040.

#### **INTMED7020 Foundations in Genetics I (3 credits)**

An overview of the clinical evaluation and the methods utilized in diagnostic testing of individuals who present for a genetic work-up is introduced. In addition, the course covers the etiology, natural history, and treatment of genetic disorders needed for the practice of genetic counseling. Discussions around each diagnostic technology were framed around specific genetic conditions covered. This course is in alignment with systems approach used in INTMED7000. One hour a week of this course includes a practice based or case-based learning approach which is in alignment with the content delivered in INTMED7000 and INTMED7040.

#### **INTMED7040 Foundations in Genetic Counseling I (2 credits)**

This course will provide a framework for the evolution and models of genetic counseling practice. An introduction to the fundamental skills, including pedigree taking and analysis, case preparation, obtaining medical and developmental histories, and interview techniques, necessary to practice will be provided. In addition, one hour a week of this course includes a practice based or case-based learning approach which is in alignment with the content delivered in INTMED7000 and INTMED7020.

#### **HTHRHSC5900 Health Sciences Research (3 credits)**

Overview of research in the Health Sciences. This course is intended to prepare students to be educated consumers of research and enable them to find, understand, interpret, and apply research findings in their professional practice.

#### **INTMED8050 Current Technologies (2 credits)**

Through clinical cases and reports, Students investigate the techniques used to identify alterations in the genome and the bioinformatics resources used to interpret them. Students developed knowledge and skills to explain technical aspects of diagnostic and screening methods; discuss sensitivity, specificity, and implications of genetic test results; and interpret clinical significance of test results depending on situational variables

#### **INTMED7189.01 Seminar Series I (1 credit)**

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This seminar series is an examination of current topics, cases and research related to the provision of clinical genetic services. The course will focus on critically reading and reviewing literature in the context of service delivery; examining the genetic etiology, medical management, and counseling aspects of clinical care through individual case presentations; and discussing and evaluating research studies. This course is student-facilitated and all Division Faculty attend and participate in discussions.

## **INTMED7189 Clinical Practicum I (3 credits)**

Students will observe and are introduced to content, skills, and resources utilized in genetic counseling based on Practiced Based Competencies determined by the Accreditation Council for Genetic Counseling (ACGC) and the OSU Ability-Based Outcomes. This practicum will also include rotations in biochemical, molecular, cytogenetic, and newborn screening laboratories.

## **SPRING SEMESTER YEAR 1**

### **INTMED7010 Foundations in Medicine II (2 credits)**

This course is a continuation of INTMED7000 will continue to explore the normal human systems and pathophysiology needed for the practice of genetic counseling and working with a healthcare team. Again, one hour a week of this course is a practice based or case-based learning approach which is in alignment with the content delivered in INTMED7030 and INTMED7050.

### **INTMED7030 Foundations in Genetics II (3 credits)**

This course is a continuation of INTMED7020. This course will be in alignment with systems approach used in INTMED7000. One hour a week of this course includes a practice based or case-based learning approach which will be in alignment with the content delivered in INTMED7010 and INTMED7050.

### **INTMED7050 Foundations in Genetic Counseling II (2 credits)**

This course provides a framework for the evolution and models of genetic counseling practice. An introduction to the fundamental skills, including pedigree taking and analysis, case preparation, obtaining medical and developmental histories, and interview techniques, necessary to practice will be provided. In addition, one hour a week of this course includes a practice based or case-based learning approach which will be in alignment with the content delivered in INTMED7010 and INTMED7030.

### **INTMED7100.01 Advanced Clinical Skills - Reproductive Genetic Counseling (1 credit)**

Students obtain skills needed to provide reproductive genetic counseling. Aspects of this disciplines were explored in the context of case preparation, medical and family history analysis, risk assessment and counseling, differential diagnosis, offering appropriate testing options, interpreting results, explaining complex genetics concepts to patients, creating visual aids for counseling, and psychosocial assessment and counseling.

### **INTMED7100.02 Advanced Clinical Skills – Cardiogenetic Genetic Counseling (1 credit)**

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Students gain the skills needed to provide adult genetic counseling services (cardio genetics, neurogenetics, and medical genetics). Aspects of these disciplines were explored in the context of case preparation, medical and family history analysis, risk assessment and counseling, differential diagnosis, offering appropriate testing options, interpreting results, explaining complex genetics concepts to patients, creating visual aids for counseling, and psychosocial assessment and counseling.

## **INTMED7100.3 Advanced Clinical Skills – Pediatric Genetic Counseling (1 credit)**

Students gain the skills needed to provide pediatric genetic counseling. Aspects of these disciplines will be explored in the context of case preparation, medical and family history analysis, risk assessment and counseling, differential diagnosis, offering appropriate testing options, interpreting results, explaining complex genetics concepts to patients, creating visual aids for counseling, and psychosocial assessment and counseling.

## **INTMED7100.4 Advanced Clinical Skills – Cancer Genetic Counseling (1 credit)**

Throughout this course students focus on the skills needed to provide cancer genetic counseling services. Aspects of these services will be explored in the context of case preparation, medical and family history analysis, risk assessment and counseling, differential diagnosis, offering appropriate testing options, interpreting results, explaining complex genetics concepts to patients, creating visual aids for counseling, and psychosocial assessment and counseling. Indications for specific clinical scenarios were provided.

## **INTMED7189.02 Seminar Series II(1 credit)**

This seminar series is an examination of current topics, cases and research related to the provision of clinical genetic services. The course will focus on critically reading and reviewing literature in the context of service delivery; examining the genetic etiology, medical management, and counseling aspects of clinical care through individual case presentations; and discussing and evaluating research studies. This course is student-facilitated and all Division Faculty attend and participate in discussions.

## **INTMED7189.02 Clinical Practicum II (1.5 credits)**

Students gain practical experience by providing genetic counseling services in clinical placements. They apply content learned in other courses. They will begin to acquire core cases and work to develop the skills necessary to achieve the ACGC Practice Based Competencies.

## **INTMED7189.03 Clinical Practicum III (1.5 credits)**

Students gain practical experience by providing genetic counseling services in a clinical placement. They apply content learned in other courses. They will begin to acquire core cases and work to develop the skills necessary to achieve the ACGC Practice Based Competencies.

## **INTMED7999.02 Thesis I (2 credits)**

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Students implement their IRB approved graduate level research project developed in INTMED7998 under the supervision of a thesis advisory committee.

## **SUMMER SEMESTER**

### **INTMED7189.04 Summer Clinical Practicum IV (5 credits)**

Students will gain practical experience by providing genetic counseling services in a five day a week, six week long clinical placement (36 hours per week). They will apply content learned in other courses and will work to achieve comprehensive cases towards their ACGC clinical log book and achieve mastery of the ACGC Practice Based Competencies.

### **INTMED7189.05 Summer Clinical Practicum V (5 credits)**

Students will gain practical experience by providing genetic counseling services in a five day a week, six week long clinical placement (36 hours per week). They will apply content learned in other courses and will work to achieve comprehensive cases towards their ACGC clinical log book and achieve mastery of the ACGC Practice Based Competencies.

### **INTMED7999.02 Thesis II (2 credits)**

Students implement their IRB approved graduate level research project developed in INTMED7998 under the supervision of a thesis advisory committee.

## **AUTUMN SEMESTER YEAR 2**

### **INTMED7080 Advanced Genetic Counseling I (3 credits)**

Students will explore psychological impact of genetic conditions on the individual & family; review and application of counseling theory & interview techniques in GC practice. Role -play, case discussion, and interactions with consumers of genetic services will be utilized to achieve the course goals and learning objectives.

### **INTMED7189.01 Seminar Series I (1 credit)**

This seminar series is an examination of current topics, cases and research related to the provision of clinical genetic services. The course will focus on critically reading and reviewing literature in the context of service delivery; examining the genetic etiology, medical management, and counseling aspects of clinical care through individual case presentations; and discussing and evaluating research studies. This course is student-facilitated and all Division Faculty attend and participate in discussions.

### **INTMED7189.06 Clinical Practicum VI (2 credits)**

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Students will participate in clinical care. Placements will be 2-3 days per week. They will apply content learned in other courses and will work to achieve comprehensive cases towards their ACGC clinical log book and achieve mastery of the ACGC Practice Based Competencies.

## **INTMED7189.07 Clinical Practicum VII (2 credits)**

Students will participate in clinical care. Placements will be 2-3 days per week. They will apply content learned in other courses and will work to achieve comprehensive cases towards their ACGC clinical log book and achieve mastery of the ACGC Practice Based Competencies.

## **INTMED7999.03 Thesis III (3 credits)**

Students work toward finalizing data collection, analyzing data, and begin to write manuscript.

## **SPRING SEMESTER YEAR 2**

## **INTMED7090 Advanced Genetic Counseling II (3 credits)**

Advanced examination of genetic counseling practice with attention to ethical, legal, social issues will occur in this course. Sessions on professional development topics, such as reflective practice, cultural competency, work-life balance, transitioning to practice and advocacy roles will be addressed. Role - play, case discussion, and interactions with consumers of genetic services will be utilized to achieve the course goals and learning objectives.

## **INTMED8010 The Business of Genetics (1 credit)**

Students will explore strategic planning & business development in clinical genetics. The course will address process and practice improvement, needs assessments, general budgeting, marketing an PR, billing & reimbursement regulations. Evaluate how business practices in the field of genetics are shaped by culture, law, social policy, and technology.

## **INTMED7189.02 Seminar Series II (1 credit)**

This seminar series is an examination of current topics, cases and research related to the provision of clinical genetic services. The course will focus on critically reading and reviewing literature in the context of service delivery; examining the genetic etiology, medical management, and counseling aspects of clinical care through individual case presentations; and discussing and evaluating research studies. This course is student-facilitated and all Division Faculty attend and participate in discussions.

## **INTMED7189.068 Clinical Practicum VIII (2 credits)**

Students will participate in clinical care. Placements will be 2-3 days per week. They will apply content learned in other courses and will work to achieve comprehensive cases towards their ACGC clinical log book and achieve mastery of the ACGC Practice Based Competencies.

## **INTMED7189.09 Clinical Practicum IX (2 credits)**

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Students will participate in clinical care. Placements will be 2-3 days per week. They will apply content learned in other courses and will work to achieve comprehensive cases towards their ACGC clinical log book and achieve mastery of the ACGC Practice Based Competencies.

## **INTMED7999.04 Thesis IV (2 credits)**

Students will prepare manuscript and/or abstract for submission to a reputable national journal or national conference. They will orally present their dissertation in a closed oral defense with their thesis advisory committee.

## **PROGRAM ELECTIVES:**

### **EDUCST7717 Interdisciplinary Perspectives in Developmental Disabilities (3 credit hours)**

This course is an introduction to the psychosocial, medical, and educational implications of developmental disabilities.

### **EDUCST7718 Interdisciplinary Perspective on Autism Spectrum Disorder (3 credit hours)**

Teaches the analytical skills necessary to comprehend and formulate an interdisciplinary framework relating to major scientific and theoretical perspectives in autism spectrum disorders.

### **SPHHRNG5193 Individual Studies (LEND Program "Leadership Seminar") (1-3 credit hours)**

This seminar presents didactic information, trainee led discussion, and directed practice related to the development of MCH leadership competencies and public health policy. Topics are organized into modular themes which may last 1 – 3 weeks and include topics such as: Ethics/Professionalism, Public Policy and Health, MCH Leadership, Cultural Awareness and Sensitivity, Social Determinants of Health, Health Equity, and Health Promotion, Special Clinical Topics, Evidence Based Practices in DD

### **BIOETHC7895 Bioethical Issue in Genetic Counseling (3 credit hours)**

The course aims to give students the ethical background to lead in an ongoing national dialogue about the ethical, legal, and social implications of advances in genomic technology, reproductive health and the professional responsibility of counseling.