

MIDWESTERN UNIVERSITY
COLLEGE OF GRADUATE STUDIES
POST GRADUATE CERTIFICATE in PRECISION MEDICINE- Class of 2023
Curriculum 2021-2023

First Year **10 yearly credits**

Summer quarter 2021 **2 credit hours**

PMGCG 501 Introduction to Genetics and Genomics 2.0

Fall quarter 2021 **3 credit hours**

PMGCG 502 Genomics of Rare and Complex Diseases 3.0

Winter quarter 2021 **3 credit hours**

PMGCG 503 Introduction to Bioinformatics, Statistics, and Data Interpretation 3.0

Spring quarter 2022 **3 credit hours**

PMGCG 504 "Omics and Biomarkers" 3.0

Second Year **12 yearly credits**

Summer quarter 2022 **3 credit hours**

PMGCG 601 Molecular Pathology of Cancer: Screening, Prognosis, Diagnosis, and Treatment 3.0

Fall quarter 2022 **3 credit hours**

PMGCG 602 Pharmacogenomics 2.0
 Elective 1.0

Winter quarter 2022 **3 credit hours**

PMGCG 603 Microbial Genetics, the Microbiome, and Infectious Disease 2.0
 Elective 1.0

Spring quarter 2023 **3 credit hours**

PMGCG 604 Ethical, Legal and Social Issues of Precision Medicine 1.0
 PMGCG 605 Counseling and Communication Skills for Genomic/Precision Medicine 1.0
 Elective 1.0

Credit Totals:

First year credits **10.0**

Second year credits **12.0**

Total for Program Completion: **22 credits**

Elective options

PMGCG 801 Application of Precision Medicine to Inflammatory and Autoimmune Diseases
 PMGCG 802 Molecular Pathology of Neurological Diseases: Screening, Prognosis, Diagnosis and Treatment
 PMGCG 803 Application of Precision Medicine to Cardiovascular Diseases
 PMGCG 804 Advanced Topics in Pharmacogenomics
 PMGCG 805 A One Health Approach to Genomics and Precision Medicine
 PMGCG 806 Epigenomics, Gene Regulatory Networks, and Functional Genomics in Health and Disease
 PMGCG 807 Genetic Technologies for the Treatment of Disease
 PMGCG 808 Precision Medicine Journal Club
 PMGCG 809 Understanding and Interpreting Direct to Consumer Testing