

Course Syllabus
Oregon Masters of Public Health Program
Oregon Health & Science University

**Genomics and Public Health Policy:
Current Issues and Future Trends**
PHPM 507

Genomic science and associated technologies are facilitating an unprecedented rate of discovery of novel insights into the relationship between human genetic variation and health. Genomics is a new discipline that studies the functions and interactions of all the genetic material in the genome, including interaction with environmental factors. The emphasis is on understanding how systems work instead of how the isolated genes make things happen on their own. Public Health Genomics seeks to understand genetic factors that contribute to individual and group variation in disease risk, and to translate that knowledge into actions and practice reflected in the core functions of public health. Understanding the role genomics plays in the health of individuals, families and communities enables public health professionals and clinicians to better advise patients, program planners and policymakers in the best use of this rapidly developing field.

Credit Hours: 3

Class Description: An on-line course for asynchronous critically reflective Weblog discussions of assigned readings, and genomics forums with genomic researchers and policy makers. The course is targeted to OMPH students but also open to selected post-bacc and graduate students in the health sciences at OHSU, PSU and OSU, and members of the public health workforce.

**Weekly Cyber-
(audio) Sessions** Mondays and Fridays

Instructors: Gregory Fowler, PhD, Affiliate Associate Professor and Senior Research Associate, Department Public Health & Preventive Medicine (OHSU); School of Community Health (PSU) gflower@geneforum.org

Michael Flower, Ph.D. Professor of Interdisciplinary Science Studies, University Honors Program & Center for Science Education, Portland State University,
<http://www.pdx.edu/unst/profile/meet-michael-flower>

Office Hours: By appointment

Readings and Tools:

- Peer-reviewed published papers and background articles, as assigned, most available in Sakai
- Videos, Webcasts, Webinars, Power-points, as assigned, most available in Sakai

Learning Objectives:

- Assess and interpret current literature in the areas of genomics and public health.
- Explore the interaction between genes and the environment and their implications for disease development and prediction of disease risk and prevention.
- Apply evidence-based biological and molecular concepts to inform public health policy and regulations.
- Identify ethical, legal, social and cultural issues generated by the application of genomic research to the practice of public health.
- Understand the need for effective education of health-care providers, consumers and policy makers about genomics medicine and public health.

Course Evaluation & Activities:

Activity	Total Points per Activity
Weblog reflections of assigned readings (1/ week)	30 points
Genomics Forums (1/week)	15 points
Cyber session Q&A	20 points
Weekly “Sherpa” Duty	10 points
Final Paper and Public Forum Presentation	25 points
Total	100 points

"Our program is committed to all students achieving their potential. If you have a disability or think you may have a disability (including but not limited to physical, hearing, vision, psychological and learning disabilities), which may need an accommodation, please contact the Coordinator for Student Access, Sue Orchard, at 503-494-0082 to discuss your request. All information regarding a student’s disability is kept in accordance with relevant state and federal laws. <http://www.ohsu.edu/academic/acad/osahome.html>"

Class Calendar:

Week	TOPIC	READINGS/Activities
1 & 2 01.07-18	Course Introduction Sakai Tutorial Weblog discussion/ Genomics Forums 1 & 2 Module 1 Genomics and P4 Medicine	Readings & Tools in Sakai
3 01.21-25	Weblog discussion/Genomics Forum 3 Module 2 Social Epidemiology and Health Care Disparities	Readings & Tools in Sakai

<p>4 01.28-02.01</p>	<p>Weblog discussion/Genomics Forum 4 Module 3 Genetic Epidemiology, Pre-Natal and Newborn Screening</p>	<p>Readings & Tools in Sakai</p>
<p>5 & 6 02.04-15</p>	<p>Weblog discussion/Genomics Forums 5 & 6 Module 4 Genetic Testing and Privacy</p>	<p>Readings & Tools in Sakai</p>
<p>7 02.18-22</p>	<p>Weblog discussion/Genomics Forum 7 Module 5 Genome Sequencing and Personalized Medicine</p>	<p>Readings & Tools in Sakai</p>
<p>8 02.25-03.01</p>	<p>Weblog discussion/Genomics Forum 8 Module 6 Epigenomics and Nutrition (Obesity and Diabetes)</p>	<p>Readings & Tools in Sakai</p>
<p>9 & 10 03.04-15</p>	<p>Prepare Final Paper and Power Point for a Genomics Forum for Health Care Providers, Policy Makers and the General Public</p>	<p>Working in Teams</p>
<p>11</p>	<p>Public Forum Presentation Tentatively scheduled from 12 Noon-2 p.m. March 21 or 22 at OHSU or PSU, respectively</p>  <p>Note: The above schedule is subject to change depending upon class progress.</p>	