

## Genomics Education Resources

For self-guided learning or resources to help add genomics into your nursing curriculum

Compiled by: Global Membership Committee, ISONG

Updated: 12/29/2019

Resource name	Link	Organization	Description
Omics Nursing Science and Education Network (ONSEN)	<a href="https://omicsnursingnetwork.net/">https://omicsnursingnetwork.net/</a>	National Institute of Nursing Research	<ul style="list-style-type: none"> <li>Resources for investigators, mentors, and trainees plus education and networking opportunities</li> <li>Resources for training for integration of omics</li> <li>Common data elements support</li> <li>Exploring partnerships in omics research</li> </ul>
Method for Introducing a New Competency: Genomics (MINC)	<a href="https://genomicsintegration.net/">https://genomicsintegration.net/</a>	National Human Genome Research Institute	<ul style="list-style-type: none"> <li>A toolkit providing links to external resources, clinical exemplars for integrating genetics/genomics into healthcare systems</li> <li>Interactive, evolving case studies to test genetic nurse competencies</li> </ul>
Genetics/Genomics Competency Center	<a href="https://genomicseducation.net/">https://genomicseducation.net/</a>	G2C2	<ul style="list-style-type: none"> <li>Online repository of genomics and education materials</li> <li>Peer-reviewed collections for genetic counselors, nurses, pharmacists, physician assistants, and physicians</li> </ul>
Genetics Education Program for Nurses (GEPN)	<a href="https://www.cincinnatichildrens.org/education/clinical/nursing/genetics">https://www.cincinnatichildrens.org/education/clinical/nursing/genetics</a>	Cincinnati Children's	<p>Website includes basic instructional resources in clinical genomics including:</p> <ul style="list-style-type: none"> <li>Genetics is Relevant Now: Nurses' Views and Patient Stories</li> <li>Chromosome, DNA, Gene (power point presentation)</li> <li>Mendelian Inheritance/Meiosis Connection</li> </ul> <p>Website includes additional links to alternative resources including:</p> <ul style="list-style-type: none"> <li>The Jackson Laboratory Clinical Topics (resources and self-paced online modules)</li> <li>G3C Genomic Health Care Simulations</li> </ul>
Genome: Unlocking Life's Code	<a href="https://unlockinglifescode.org/best-of-unlocking-lifes-code-featured-resources-2018">https://unlockinglifescode.org/best-of-unlocking-lifes-code-featured-resources-2018</a>	Smithsonian National Museum of Natural History and National Human Genome Research Institute	<ul style="list-style-type: none"> <li>Resources and tools for an understanding of current topics in genomics, the technology driving advances in genetics and genomics, and the effects of genomics in our lives and on our society</li> </ul>
Gen-Equip Project	<a href="https://www.primarycaregenetics.org">https://www.primarycaregenetics.org</a>	Partnership of Experts in Primary Care Genetics	<ul style="list-style-type: none"> <li>A project that combines education, primary care, and genetics</li> <li>This group aims to enable health professionals working in primary care to understand and use genetics in practice</li> </ul>

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			<ul style="list-style-type: none"> <li>• Includes online learning modules, webinars, practical tools, case studies and more</li> </ul>
Learn Genetics	<a href="https://learn.genetics.utah.edu/">https://learn.genetics.utah.edu/</a>	The University of Utah	<ul style="list-style-type: none"> <li>• Genetics website that provides engaging, multimedia educational materials at no cost</li> </ul>
Genetics for Health professionals	<a href="https://www2.le.ac.uk/projects/vgec">https://www2.le.ac.uk/projects/vgec</a>	Virtual Genetics Education Centre	<ul style="list-style-type: none"> <li>• An award-winning hub of evaluated genetics teaching resources for teachers and learners in schools and higher education, health professionals and the general public.</li> </ul> <p>Resources include:</p> <ul style="list-style-type: none"> <li>• simple experiments suitable for all ages</li> <li>• tutorial material</li> <li>• videos on useful techniques</li> <li>• current and relevant links to other evaluated resources</li> </ul>
Online Genetics Education Resources	<a href="https://www.genome.gov">https://www.genome.gov</a>	National Human Genome Research Institute	<ul style="list-style-type: none"> <li>• This is a comprehensive listing of genetics education resources</li> <li>• It includes networking sites, documentary films, lectures, booklets, activities and programs</li> </ul>
ESH Genetic Education Materials and Resources (euroGEMS)	<a href="http://www.eurogems.org/">http://www.eurogems.org/</a>	European Society of Human Genetics	<ul style="list-style-type: none"> <li>• A repository of materials and resources for genetic professionals, universities/students, patients and families, primary schools, secondary schools, and ELSI topics</li> </ul>
Genomics Education Programme	<a href="https://www.genomicseducation.hee.nhs.uk">https://www.genomicseducation.hee.nhs.uk</a>	NHS Health Education England	<ul style="list-style-type: none"> <li>• Educational opportunities for health professionals</li> <li>• Teaching resources</li> <li>• Genomics glossary</li> </ul>

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Journal articles of interest:

### **Primer series for nurses in genomics**

- Announcing the Primer in Genetics and Genomics Series (Alexander, 2017)
- Primer in Genetics and Genomics, Article 1: DNA, Genes, and Chromosomes (Dorman, Schmella, Wesmiller, 2017)
- Primer in Genetics and Genomics, Article 2: Advancing Nursing Research with Genomic Approaches (Lee, Gill, Barr, Yun, Kim, 2017)
- Primer in Genetics and Genomics, Article 3: Explaining Human Diversity: The role of DNA (Read, 2017)
- Primer in Genetics and Genomics, Article 4: Inheritance Patterns (Aiello, Chiatti, 2017)
- Primer in Genetics and Genomics, Article 5: Further Defining the Concepts of Genotype and Phenotype and Exploring Genotype-Phenotype Associations (Wright, Fessele, 2017)
- Primer in Genetics and Genomics, Article 6: Basics of Epigenetic Control (Fessele, Wright, 2018)
- Primer in Genetics and Genomics, Article 7: Multifactorial Concepts: Gene-Gene Interactions (Stanfill, Starlard-Davenport, 2018)

### **Other articles:**

- Genetic competencies for effective pediatric endocrine nursing practice (Davies and Dwyer, 2019):  
<https://www.ncbi.nlm.nih.gov/pubmed/?term=dwyer+aa+davies>