

	Course	Curricular Content	Teaching Strategies	Competency
Policy		<p>Conditions</p> <p>Advocacy</p> <p>Ethics</p> <p>Social Impacts (within context of culture &amp; society)</p> <p>Exposures</p> <p>Global health</p> <p>Social activism</p>	<p>Monitor Congress and EPA Discussions.</p> <p>Respond to current issues such as Safe Chemicals, Clean Air Act, Hydraulic Fracturing,</p> <p>Learn about advocacy for clean air and climate health at <a href="http://envirn.org/pg/pages/view/82102/advancing-clean-air-climate-amp-health-opportunities-for-nurses">http://envirn.org/pg/pages/view/82102/advancing-clean-air-climate-amp-health-opportunities-for-nurses</a></p> <p>Write or visit legislator (local, state, national) about an EH issue that is important to them</p> <p>Examine the local health system's policies related to sustainability (food services, energy, waste management, housekeeping, etc) <a href="http://webpages.uidaho.edu/sustainability/">http://webpages.uidaho.edu/sustainability/</a></p> <p>Follow a bill through the legislative session.</p> <p>Global: examine the international organizations involved in EH advocacy</p> <p>Examine international treaties &amp; agreements that influence EH: World Health Assembly, WHO, WTO, UN</p>	<p>Integrate organizational science and informatics to make changes in the care environment to improve health outcomes (AACN, 2011, p. 10)</p> <p>Analyze how policies influence the structure and financing of health care, practice, and health outcomes (AACN, 2011, p. 21).</p> <p>Participate in the development and implementation of institutional, local, and state and federal policy (AACN, 2011, p. 21).</p> <p>Examine the effect of legal and regulatory processes on nursing practice, healthcare delivery, and outcomes (AACN, 2011, p. 21).</p> <p>Interpret research, bringing the nursing perspective, for policy makers and stakeholders. (AACN, 2011, p. 21)</p>

				<p>Advocate for policies that improve the health of the public and the profession of Nursing (AACN, 2011, p. 21).</p> <p>Create partnerships that promote sustainable environmental health policies and conditions (ANA, 2010, p. 61).</p> <p>Analyzes the impact of social, political, and economic influences upon the environment and human health exposures (ANA, 2010, p. 61)..</p> <p>Advocates for implementation of environmental principles for nursing practice (ANA, 2010, p. 62).</p> <p>Support nurses in advocating for and implementing environmental principles in nursing practice and public health. (ANHE, 2009; ANA, 2010, p. 62,).</p>
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				Demonstrates leadership in promoting environmentally healthy, safe, and sustainable policies and conditions (ANHE, 2009).
Population	Population Health/ Health Promotion	<p>Social determinants of health</p> <p>Health disparities</p> <p>Diversity</p> <p>Social Justice</p> <p>Environmental justice</p> <p>GIS mapping</p> <p>Epidemiological data</p> <p>Epigenetics</p> <p>Global EH/climate change</p> <p>Disaster preparedness</p> <p>Population risk assessment and management</p>	<p>Videos: Ten Americans Unnatural Causes film segments-(Place Matters) (Includes the work of Michael Marmot; Nancy Krieger &amp; David Williams)</p> <p>Locate the place where you live---Visit the "where you live" map. <a href="http://www.epa.gov/compliance/whereyoulive/index.html">http://www.epa.gov/compliance/whereyoulive/index.html</a> or the NPR site at <a href="http://www.npr.org/news/graphics/2011/10/toxic-air/#4.00/39.00/-84.00">http://www.npr.org/news/graphics/2011/10/toxic-air/#4.00/39.00/-84.00</a></p> <p>Use GIS mapping to demonstrate hazardous exposure risks and vulnerable populations. Use EJ data for illustration. Use the EJ View of the EPA site at <a href="http://epamap14.epa.gov/ejmap/entry.html">http://epamap14.epa.gov/ejmap/entry.html</a></p> <p>Case study for disaster with implications for environmental health (toxic exposures after Hurricane Katrina; toxic exposures from Japan earthquake; climate changes and health risks) View the EPA climate change extreme events site <a href="http://www.epa.gov/climatechange/effects/extreme.html">http://www.epa.gov/climatechange/effects/extreme.html</a></p> <p>Surveillance data for environmental health</p>	<p>Apply leadership skills and decision making in the provision of culturally responsive, high-quality nursing care, healthcare team coordination, and the oversight and accountability for care delivery and outcomes (AACN, 2011, p. 12).</p> <p>Establishes partnerships that support the creation and implementation of strategies promoting healthy environments (ANHE, 2009)</p> <p>Advocates for environmental justice, including a commitment to the health of vulnerable populations &amp; the elimination of health disparities (ANHE, 2009).</p>

		Surveillance	<p>exposures and /or illness in case load</p> <p>Use WHO Global Health Observatory to examine environmental impacts on global populations:  <a href="http://apps.who.int/gho/data/node.main.122">http://apps.who.int/gho/data/node.main.122</a></p> <p>There are lots of books and movies in the popular press which can be reviewed by students and the information shared and critiqued within the class via presentations. For example, <i>A Civil Action</i>, <i>Erin Brockovitch</i>, <i>Flight Behavior</i>, <i>Hot, Flat and Crowded: Why We Need a Green Revolution and How it Can Help America</i>, <i>Gasland</i>, <i>The Body Toxic</i>.</p>	
Pathophysiology		<p>Environmental causation of disease &amp; illness</p> <p>Common routes of exposure and resultant disease processes</p> <p>Exposure pathways</p> <p>Fate &amp; Transport</p> <p>Epigenetics</p> <p>Toxicology</p>	<p>Review: Impact of environment on health show video:  <a href="http://www.youtube.com/watch?v=fNurLhVqcNs">http://www.youtube.com/watch?v=fNurLhVqcNs</a></p> <p>Review video on environmental toxins and health: 10 Americans-You tube-/films</p> <p>Unnatural Causes-  <a href="http://www.unnaturalcauses.org/">http://www.unnaturalcauses.org/</a> Assign small group activity: each group choses one of seven videos, then summarizes findings on class discussion board.</p> <p>Common routes of exposure &amp; disease processes with exposure pathways: go to  <a href="http://www.atsdr.cdc.gov/training/toxmanual/">http://www.atsdr.cdc.gov/training/toxmanual/</a> review “lecture notes” and email handouts for students in module 2.</p> <p>Review: video on air pollution (common route of exposure) and health effects</p>	<p>Apply pathophysiologic principles to the interpretation and treatment of symptoms and health processes</p> <p>Comprehend common etiologies associated with environmental health challenges.</p> <p>Describe and discuss the epidemiology, etiology, symptomatology, and pathophysiology of specific health challenges.</p>

			<p><a href="http://www.youtube.com/watch?v=xxHfxQivkHc">http://www.youtube.com/watch?v=xxHfxQivkHc</a> Have students break out into groups: EXPLORE: <a href="http://phpartners.org/environmentalhealth.html">http://phpartners.org/environmentalhealth.html</a> which is a collaboration of world public health agencies for information on <a href="#">Children's Environmental Health</a>   <a href="#">Hazardous Substances</a>   <a href="#">Air</a>   <a href="#">Water</a>   <a href="#">Toxicology</a>   <a href="#">Literature and Reports</a>   <a href="#">Data Tools and Statistics</a>   <a href="#">Education and Training</a>   <a href="#">Legislation and Policy</a>  </p> <p>Each group will choose a topic &amp; complete a brief discussion with the group on a selected toxin and its pathophysiological effects on the body.</p> <p>Review: Fate and Transport: <a href="http://www.epa.gov/region8/r8risk/models.html">http://www.epa.gov/region8/r8risk/models.html</a></p> <p>Have students break out into small groups and explore epigenetics: <a href="http://learn.genetics.utah.edu/content/epigenetics/">http://learn.genetics.utah.edu/content/epigenetics/</a> Class discussion on findings to follow.</p>	
Pharmacology		<p>Pharmacology vs toxicology</p> <p>Potential environmental threats related to the drug industry &amp; disposal of unused medications</p> <p>Disposal of waste created by</p>	<p>Review differences in pharmacology/toxicology: <a href="http://www.pharmtox.utoronto.ca/programs/undergraduate/whatispharmacology.htm">http://www.pharmtox.utoronto.ca/programs/undergraduate/whatispharmacology.htm</a></p> <p>Have students review website: <a href="http://www.ewg.org/skindeep/">http://www.ewg.org/skindeep/</a> Begin a web based discussion board on the site including thoughts on content and usefulness to nursing professionals.</p> <p>Show video: overview of environmental threats from unused medications:</p>	<p>Describe and discuss the differences between pharmacology and toxicology.</p> <p>Apply current research to create patient information that can be used in practice.</p> <p>Comprehend the impact the pharmaceutical</p>

		biohazard materials	<p><a href="http://www.youtube.com/watch?v=7wJv2IVJDGQ">http://www.youtube.com/watch?v=7wJv2IVJDGQ</a></p> <p>Have students review Safe disposal of medications website: <a href="http://www.aarp.org/health/drugs-supplements/info-02-2011/clean_out_your_medicine_cabinet.html">http://www.aarp.org/health/drugs-supplements/info-02-2011/clean_out_your_medicine_cabinet.html</a></p> <p>Have students create a patient information handout about pharmacological issues and the environment.</p> <p>Follow the disposal of biohazard waste products <a href="http://www.atsdr.cdc.gov/-toxicolgy">http://www.atsdr.cdc.gov/-toxicolgy</a> Agency for Toxic Substances and Disease Registry</p> <p>Have students review the associated press findings on pharmaceuticals and environmental pollution: <a href="http://hosted.ap.org/specials/interactives/pharmawater_site/index.html">http://hosted.ap.org/specials/interactives/pharmawater_site/index.html</a></p>	companies have on the environment both physically and socially
Physical Assessment		<p>Exposure Assessment</p> <p>Risk Assessment</p> <p>Safety of environment in home, community, workplace</p> <p>Past exposures</p>	<p>Review website: State of the air- American Lung Association <a href="http://www.stateoftheair.org/">http://www.stateoftheair.org/</a></p> <p>Review website poison places- <a href="http://www.npr.org/news/graphics/2001/toxic">http://www.npr.org/news/graphics/2001/toxic</a></p> <p>Students are assigned to read article on physical effects of pollution <a href="http://www.livestrong.com/article/137996-physical-effects-pollution/">http://www.livestrong.com/article/137996-physical-effects-pollution/</a></p> <p>Have small group discussions on the physical assessment variations that may be found in a person experiencing: water pollution, air pollution</p>	<p>Understand the impact of the environment on physical changes in people</p> <p>Engage in health challenge research using online resources.</p> <p>Incorporates environmental risk factors across the lifespan when assessing</p>

		<p>Age variation in exposures</p> <ul style="list-style-type: none"> <li>•</li> </ul>	<p>and noise pollution across the lifespan.</p> <p>Students will complete a teaching sheet for patients and the community on making their home, community and workplace safe from pollution. Students will exchange teaching sheets for peer feedback, then present to instructor, who will share reviewed sheets with the class.</p> <p>Students will obtain a peer reviewed research article on the physical effects of past exposure to pollutants on the population or individual. These articles will be shared as a journal club with other students for review.</p>	<p>individuals, families and/or communities (ANHE 2009).</p>
Communication		<p>Interprofessional collaboration</p> <p>Translating &amp; integrating EBP Education</p> <p>Communication with nurses</p> <p>Communicating with the public</p> <p>Cultural and linguistic appropriate communication</p> <p>Communicating with health care policy</p>	<p>Develop a program to educate a group or community about an environmental risk and risk reduction.</p> <p>EPA: Human Health Risk Assessment:  <a href="http://www.epa.gov/riskassessment/health-risk.htm">http://www.epa.gov/riskassessment/health-risk.htm</a></p>	<p>Communicates environmental health risks and exposure reduction strategies with patients, families and or communities (ANHE, 2009; ANA, 2010).</p> <p>Employ collaborative strategies in the design, coordination, and evaluation of patient-centered care (AACN, 2011, p. 23).</p> <p>Use effective communication strategies to develop, participate, and lead interprofessional teams and partnerships (AACN,</p>

		<p>Right to Know laws</p> <p>Risk communication</p>		<p>2011, p. 23)..</p> <p>Mentor and coach new and experienced nurses and other members of the healthcare team (AACN, 2011, p. 23).</p> <p>Integrate clinical prevention and population health concepts in the development of culturally relevant and linguistically appropriate health education, communication strategies, and interventions (AACN, 2011, p.25).</p> <p>Critically evaluate the manner in which environmental health issues are presented by the popular media (ANHE, 2009: ANA, 2010).</p>
Theoretic Foundations		<p>Bioethics</p> <p>Prevention/Promotion</p> <p>Precautionary Principle</p>	<p>Listen to Jimmy Buffet – identify the themes</p> <p>Use case as concept analysis with an EH theme</p> <p>WeACT (Harlem), EWG, ANHE – what theories where used or could have been used when developing this organization?</p> <p><a href="http://www.weact.org/">http://www.weact.org/</a></p> <p><a href="http://www.ewg.org/">http://www.ewg.org/</a></p>	<p>Explains the impact of social, political and economic influences upon the environment and human health exposures (ANHE, 2009).</p>



		<p>Ecological Model (Systems theory)</p> <p>Social Justice/ Environmental Justice- (Critical Social Thought/Feminist )</p> <p>Integration of theory with research and practice</p>	<p><a href="http://www.envirn.org/">http://www.envirn.org/</a></p> <p>10 Americans: Precautionary Principles <a href="http://www.youtube.com/watch?v=jh2p2RFAanE">http://www.youtube.com/watch?v=jh2p2RFAanE</a></p> <p>Case study: Bioethics (Civil Action, Erin Brokovich) Include Health Prevention/Promotion Theories in course (ie: Health Belief Model, PEN 3 Model, Pender's Health Promotion Model)</p>	<p>Interpret research, bringing the nursing perspective, for policy makers and stakeholders. (AACN, 2011, p. 21).</p> <p>5. Integrate clinical prevention and population health concepts in the development of culturally relevant and linguistically appropriate health education, communication strategies, and interventions (AACN, 2011, p.25).</p>
Systems		<p>Review of systems theory and other appropriate theoretical frameworks (focus on holistic)</p> <p>Structures and functions to support human populations</p> <p>Green Nursing</p>	<p>Use a systems model to make changes within an organization or community.</p> <p>Examples of health outcomes in environmental impact studies</p> <p>Identify Green Nursing organization (Green team) within a health system. Examine the cost effectiveness of this system.</p> <p>Case studies (have students represent certain players, research their needs, etc, then sit around</p>	<p>Contribute to the integration of healthcare services within systems to affect safety and quality of care to improve patient outcomes and reduce fragmentation of care (AACN, 2011, p.14).</p> <p>Advocate for policies that improve the health of the public and the profession of</p>

		Organizations Health economics	the table and attempt decision-making)	Nursing (AACN, 2011, p. 21).
Quality Improvement & Safety and Health		Chemical policy Hazardous exposures in the workplace MSDS Green cleaning Sustainability Worker safety	Examine institutional policies with a perspective of quality improvement related to a healthy work environment.  Critique community or population based environmental programs in respect to inclusion of all stakeholders.  Complete a personal exposure inventory to personal care products, cleaning products and chemotherapeutics	Assesses the practice environment for factors such as sound, odor, noise and light that threaten health (ANA, 2010, p. 61).  Direct quality improvement methods to promote culturally responsive, safe, timely, effective, efficient, equitable, and patient-centered care (AACN, 2011, p. 14).  Lead quality improvement initiatives that integrate socio-cultural factors affecting the delivery of nursing and healthcare services (AACN, 2011, p. 14).  Designs environmental health programs with community and intersectoral partners and inter-professional experts to assure a healthy and safe environment

				(ANA, 2013)
EBP/Research	Research	<p>Research ethics</p> <p>Epidemiology data</p> <p>Community-based participatory research</p> <p>Nursing EH Research examples</p>	<p>Use example from Environmental Health Perspectives: select a recent research report to review methods and findings.</p> <p>Encourage integration of EH topics for research utilization assignments.</p> <p>Compare/contrast problem solving process, research process, and epidemiology process</p> <p>Use Library of Medicine Toxnet to identify and describe the impact of the toxicology related to exposure.</p> <p>Provide data sets and have students develop appropriate questions, determine appropriate statistical analyses, analyze results, then prepare presentations of the results for professional groups and lay (community) groups</p> <p>Students may be able to access data sets from their own workplace for analysis. Many health care facilities have data on things such as handwashing, infection rates, etc., that can be explored. Students can use these data, along with literature review, to develop EBP guidelines for their institutions?</p>	<p>Integrate theory, evidence, clinical judgment, research, and interprofessional perspectives using translational processes to improve practice and associated health outcomes for patient aggregates (AACN, 2011, p. 16).</p> <p>Advocate for the ethical conduct of research and translational scholarship (with particular attention to the protection of the patient as a research participant) (AACN, 2011, p. 16).</p> <p>Articulate to a variety of audiences the evidence base for practice decisions, including the credibility of sources of information and the relevance to the practice problem confronted (AACN, 2011, p. 16).</p> <p>Participate, leading when appropriate, in collaborative teams to</p>

				<p>improve care outcomes and support policy changes through knowledge generation, knowledge dissemination, and planning and evaluating knowledge implementation (AACN, 2011, p. 16)..</p> <p>Apply practice guidelines to improve practice and the care environment (AACN, 2011, p. 16)..</p> <p>6. Perform rigorous critique of evidence derived from databases to generate meaningful evidence for nursing practice (AACN, 2011, p. 16), Apply relevant findings to develop practice guidelines and improve practice and the practice environment (AACN, 2006, p. 12)..</p>
Informatics & Health care technology		<p>GIS</p> <p>EH in Electronic Health Records</p> <p>Nurse sensitive</p>	See Population above	Analyze current and emerging technologies to support safe practice environments, and to optimize patient safety, cost-

		outcomes		<p>effectiveness, and health outcomes (AACN, 2011, p. 19).</p> <p>Evaluate outcome data using current communication technologies, information systems, and statistical principles to develop strategies to reduce risks and improve health outcomes (AACN, 2011, p. 19).</p> <p>Promote policies that incorporate ethical principles and standards for the use of health and information technologies (AACN, 2011, p. 19).</p>
Practice		<p>Practice environment</p> <p>Risk management</p> <p>Translating scholarship into practice</p> <p>EH Principles</p> <p>ANA Scope and Standards of</p>	<p>Conduct an environmental assessment of a worksite, hospital, of community. (EH assessment tools)</p> <p>Use EPA risk assessment guidelines : <a href="http://www.epa.gov/riskassessment/">http://www.epa.gov/riskassessment/</a></p> <p>EPA: Human Health Risk Assessment: <a href="http://www.epa.gov/riskassessment/health-risk.htm">http://www.epa.gov/riskassessment/health-risk.htm</a></p> <p>Discuss the “precautionary principal” <a href="http://www.sehn.org/wing.html">http://www.sehn.org/wing.html</a></p> <p>Assign students to review website best practices:</p>	<p>Synthesize broad ecological, global and social determinants of health; principles of genetics and genomics; and epidemiologic data to design and deliver evidence based, culturally relevant clinical prevention interventions and strategies (AACN, 2011, p. 25).</p>

		<p>Nursing Practice: Standard 16</p>	<p><a href="http://www.gghc.org/">www.gghc.org/</a></p> <p>Group discussion: what constitutes a safe and healthy work environment? What is the role of risk management?</p> <p>Review coalitions/partnerships: Healthcare without harm <a href="http://www.noharm.org/">http://www.noharm.org/</a></p> <p>Hospitals for a healthy environment <a href="http://practicegreenhealth.org/">http://practicegreenhealth.org/</a> Healthier hospitals: <a href="http://healthierhospitals.org/">http://healthierhospitals.org/</a> What is the nurse's role in the above coalitions/partnerships? What are the benefits and drawbacks to subscribing to these coalitions?</p> <p>Review the CDC's IPREPARE document and ways in which nurses can implement the information into practice.</p> <p>Review practice case study: Incorporating Environmental Health into Nursing Practice: A Case Study on Indoor Air Quality <a href="http://www.medscape.com/viewarticle/718616_5">http://www.medscape.com/viewarticle/718616_5</a></p> <p>Activity: Students find original research articles related to healthcare and the environment. The student summarizes one research article (no longer than one paragraph). In class small group discussions take place about application of found research to current nursing practice. Each group will present to the class their findings.</p>	<p>Use epidemiological, social, and environmental data in drawing inferences regarding the health status of patient populations and interventions to promote and preserve health and healthy lifestyles (AACN, 2011, p. 27).</p> <p>Use knowledge of illness and disease management to provide evidence-based care to populations, perform risk assessments, and design plans or programs of care (AACN, 2011, p. 27).</p> <p>Incorporate core scientific and ethical principles in identifying potential and actual ethical issues arising from practice, including the use of technologies, and in assisting patients and other healthcare providers to address such issues (AACN, 2011, p. 27).</p>
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			<p>Create a practice summary e-folder that includes class activities and dissemination of information:</p> <ol style="list-style-type: none"> <li>1. The patient information handouts (created by students) about pharmacological issues and the environment.</li> <li>2. The teaching sheet for patients and the community on making their home, community and workplace safe from pollution</li> <li>3. The peer reviewed research article on the physical effects of past exposure to pollutants on the population or individual.</li> <li>4. The collection of original research articles related to healthcare and the environment</li> </ol>	<p>Advocate for implementation of environmental principles for nursing practice (ANA, 2010, p. 62).</p>
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