

	Competency 1:	
Define Glob	al Health and explain what constitutes Global Health research	
Learning Objective 1A: Develop a personal definition of global health.	Readings:  1) Koplan, JP et al. (2009). Towards a common definition of global health. Lancet 373, 1993–95.  2) Farmer, P, Kleinman, A, Kim, J, Basilico, M (2013). Preface. In Reimagining Global Health: An Introduction (pp. xiii-xxiii). Univ of California Press, Berkeley.  3) Hunter, DJ, & Fineberg, HV (2014). Convergence to Common Purpose in Global Health. N Engl J Med, 370, 1753-1755.  Artifacts:  If someone were to ask you, "what do you mean by the term 'global health', how would you respond? After reading the assignments, provide a brief essay (i.e. < 1 page) that states your preferred definition of global health from your understanding of the referenced articles and other literature.	
Learning Objective 1B: Explain the concept of 'global health' research.	Readings:  1) Glass, RI (2013). What the United States has to gain from global health research. J of the American Med Assoc, 310(9).  2) Alumni Essays  3) Fogarty International Center. Global Health Research Topics (2015). Retrieved from <a href="http://www.fic.nih.gov/ResearchTopics/Pages/default.aspx">http://www.fic.nih.gov/ResearchTopics/Pages/default.aspx</a> Artifacts:  After reading two key assignments and browsing the list of Fogarty Global Health Research Topics, provide a brief essay (i.e. < 1 page) that states your own working definition of global health research.	
Learning Objective 1C: Cite common references, textbooks, and compendia on global health.	Readings: 1) Alumni References List  Artifacts: After reviewing the list of references, provide a brief essay (i.e. <1/2 page) pointing out 2-3 overall references on Global Health (from noted resources or from the your own experience) that are personal favorites (i.e. a starting place where you might refer a student who was looking for a better understanding of global health).	
Prompts for Competency 1 Group Discussion:		

- How is global health different from international health?
- Can domestic research be considered global research?
- What misconceptions do people have about global health and how do you respond to them?



Competency 2:	
Know the major trends in Global Health research	
Learning Objective 2A:	Readings:
Understanding research	Review the Research Theme Reading List.
themes around the following	
major global health areas: HIV,	Artifacts:
TB, Malaria; Maternal & Child	After reading at least one article from each section, provide a brief essay (< 2 pages) on a
Health; Neglected Tropical	research question that you would personally be motivated to pursue (i.e. from the
Disease; Chronic NCD; Diseases	readings, is there a frontier in global health research that excites or intrigues you? Why?
in Traveler's & Migrating	This should be different, but could be related to, your current research project.)
Populations.	
Learning Objective 2B:	Readings:
Explain what is meant by the	1) World Health Organization. <u>Backgrounder 3: Key Concepts In Social</u>
concept 'social determinants of	<u>Determinants of Health</u> .
health'.	2) Marmot, M (2006). <u>Health in an unequal world</u> . <u>Lancet 368</u> , 2081-94.
	Artifacts:
	After reading key articles listed in the reference section for Competency 2, provide a
	brief essay (< 1 page) in which you identify the disease process you are currently
	researching and list the major social determinants that contribute to the disease
	process. (Alternatively, you may instead write the essay on the essay topic you
	submitted for 2A).
Learning Objective 2C:	Readings:
Describe the concepts of	1) Review the Global Burden of Disease Report Country Profile for the country
population health and global	where your research will occur: Institute for Health Metrics and Evaluation
burden of disease. How are	(2013). Retrieved from <a href="http://www.healthdata.org/gbd">http://www.healthdata.org/gbd</a>
these used to inform policy?	2) Bollyky, TJ, Murray, C, & Kates, J (2013, February). The Global Burden of
	Disease and its Implications for U.S. Policy. Presented at Council on Foreign
	Relations . Retrieved from www.cfr.org/world/global-burden-disease-its-
	implications-us-policy/p30043  3) Waage et al. (2010). The millenium development goals: A cross-sectoral
	analysis and principles for goal setting after 2015. Lancet 376, 991-1023.
	4) Lim et al. (2012). A comparative risk assessment of burden of disease and
	injury attributable to 67 risk factors and risk factor clusters in 21 regions, 1990–
	2010: A systematic analysis for the Global Burden of Disease Study 2010. Lancet
	<u>380,</u> 2224-2260.
	Artifacts:
	In a brief essay (less than 2 pages) reflect on these questions:
	1) How does your research topic fit into the concept of population health and/or
	relate to the millennium development goals?
	2) If you were a policy-maker and read these reports, which priority areas would
	you fund in your country?
	3) How can researchers use data to influence policy?



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# Learning Objective 2D: Describe the concepts of Capacity Building & Health Systems Strengthening.

#### **Readings:**

- 1) Travis, P, et al. (2004). <u>Overcoming health-systems constraints to achieve the</u> Millennium Development Goals. Lancet 364, 900-906.
- 2) Boozary AS, Farmer PE, & Jha AK (2014). <u>The Ebola Outbreak, Fragile Health Systems, and Quality as a Cure</u>. <u>J American Med Assoc 312</u>(18), 1859-1860.
- 3) Crisp, B, Swerissen, H, & Duckett, SJ (2000). <u>Four approaches to capacity building in health: consequences for measurement and accountability</u>. <u>Health Promotion Intl, 15(2)</u>, 99-107.
- 4) Crisp, LN (2011). Global health capacity and workforce development: Turning the world upside down. Infect Dis Clin N Am, 25, 359-367.

#### **Artifacts:**

Provide a brief essay (< 1 page) describing how health systems could be strengthened in the geographical region where you are working.

### **Learning Objective 2E:** Explain implementation Science.

#### Readings:

- 1) El-Sadr, WM, Philip, NM, Justman, J (2014). <u>Letting HIV Transform Academia Embracing Implementation Science</u>. N Engl J Med, 370(18), 1679-1681.
- 2) Fogarty International Center (2013). Frequently Asked Questions about Implementation Science. Retrieved from

http://www.fic.nih.gov/News/Events/implementation-science/Pages/faqs.aspx

3) Fogarty International Center (2014). Scientists must transfer findings to practice more quickly. Retrieved from

http://www.fic.nih.gov/News/GlobalHealthMatters/march-april-2013/Pages/implementation-science-policy.aspx

#### **Artifacts:**

Provide a brief essay (< 1 page) of how a scientific finding in the content topic of your research would be a good example of implementation science (or alternatively, where is a gap in implementation science as it pertains to your research topic).

#### **Prompts for Competency 2 Group Discussion:**

- What impact did the health systems in Africa have on the spread of Ebola?
- How can researchers build capacity to prevent future outbreaks from occurring?
- Do researchers in LMIC countries view capacity building differently than researchers from high-income countries? What are the implications of differing views on capacity building?

#### **Guest Lecture on Implementation Science**



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#### **Competency 3:**

#### Identify organizations funding global health research and the pathways to achieving support

#### Learning Objective 3A:

### Identify Funding Opportunities for Global Health Research.

#### Readings:

- 1) National Institute of Allergy and Infectious Diseases (2014). New Investigator Guide to NIH Funding. Retrieved from
- http://www.niaid.nih.gov/researchfunding/grant/pages/newpiguide.aspx#new18
- 2) Review the "Sample NIH Funding Opportunity Announcement (FOA)" on our consortium website.
- 3) Fogarty International Center (2015). Fogarty Funding Opportunities Dates and Deadlines. Retrieved from <a href="http://www.fic.nih.gov/Funding/Pages/Fogarty-Funding-Opps.aspx">http://www.fic.nih.gov/Funding/Pages/Fogarty-Funding-Opps.aspx</a>

#### **Artifacts:**

- 1) Using the Sample NIH FOA on our website, answer these questions:
  - What areas of research does this institute fund?
  - Is this FOA meant for new investigators or PI's with experience?
  - How much money can you request each year?
  - Who would you contact with questions?
  - What documents are required for this application?
- 2) Identify at least one funding opportunity that you would be eligible to apply for. Create a PDF of the funding opportunity and review it with your mentorship team or the Program Manager.

#### Learning Objective 3B:

Understand the NIH structure and approaches to obtaining NIH funding.

#### **Readings:**

- 1) National Institutes of Health (2013). The NIH Almanac. Retrieved from <a href="http://www.nih.gov/about/almanac/organization/index.htm">http://www.nih.gov/about/almanac/organization/index.htm</a>
- 2) National Institutes of Health (2014). Peer Review Process. Retrieved from http://grants.nih.gov/grants/peer review process.htm
- 3) National Institutes of Health (2013). Types of Grant Programs. Retrieved from http://grants.nih.gov/grants/funding/funding\_program.htm

#### **Artifacts:**

- 1) In a Word Document identify:
  - Which NIH Institute funds your research area?
  - What is the difference between an NIH Center & an NIH Institute?
  - If eligible, which NIH Award would you apply for? What is required in the application?
- 2) Develop a timeline and a list of items required (e.g. NIH Biosketch, LoS, etc.) for submitting a grant to NIH if the funding deadline is 6 months from today.



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Learning Objective 3C:	Readings:
Describe non-NIH funding	1) National Institutes of Health (2015). Non-NIH Funding Opportunities – Grants
entities and their approach to	and Fellowships. Retrieved from
funding.	http://www.fic.nih.gov/Funding/NonNIH/Pages/default.aspx
	A difference
	Artifacts:
	1) List 3 non-NIH funding opportunities that you could be eligible for. Look at
	organizations such as:
	Gates Foundation
	Wellcome Trust
	Doris Duke Charitable Foundation
	Howard Hughes Medical Institute
	Associations based on your research interest
	2) Develop a timeline for submitting a grant to a Non-NIH funding institute with a deadline of 6 months from today.
Learning Objective 3D:	Readings:
Understand how to develop a	1) Case Study: Identifying Hidden Costs in International Budgets
study budget and supply-chain management.	2) Review the cheat sheet: <u>"Allowable Costs"</u>
	Artifacts:
	1) Complete the Case Study Worksheet.
	2) Participate in the guest lecture and then submit a study budget for your project or a future project to the Program Manager.
Learning Objective 3E:	Readings:
Understand the components	1) Review two sample proposals as if you were an NIH reviewer (available
of a grant application.	on program website).
	2) Wisdom, JP, Riley, H, & Myers, N (2015). Recommendations for writing
	successful grant proposals: An information synthesis. Acad Med. [Epub
	ahead of print]
	Artifacts:
Prompts for Competency 3 Gro	Provide review feedback on the sample proposals, including your

- Which organizations fund global health research?
- How do researchers cope with rejection and success in grant writing?
- At what point do you think trainees should become independent investigators rather than mentored trainees?

Guest Lecture on Grant Writing (sample proposals from 3E will be utilized) Guest Lecture on Budgeting & Supply Chain Management (case studies from 3D will be utilized)



	Competency 4:
	Develop strong research proposals
Learning Objective 4A: Identify your career goals and define your general research agenda.	Readings:  1) Harvard University John F. Kennedy School of Government (2011, winter).  What's Your Research Agenda? CSWEP Newsletter Retrieved from <a href="http://www.hks.harvard.edu/fs/rpande/papers/cswep_research.pdf">http://www.hks.harvard.edu/fs/rpande/papers/cswep_research.pdf</a>
	Artifacts:  1) Complete the "Setting a Research Agenda" Workbook and submit a one-page statement to the Program Manager. PLEASE NOTE: This is about laying out the steps in your research career (e.g. where you would like to be if things goes as you hope), NOT a restatement of the steps you wish to accomplish for your research proposal.  http://mcs.open.ac.uk/mp8/agenda%20workbook.pdf
Learning Objective 4B: Frame your research question.	Readings:  1) Moyer, CA (2011). Conceptualization of Research Topics and Formulation of Specific Aims. PowerPoint Presented at the Global Health Council Annual Meeting, Washington, DC.  2) Durbin Jr., CG (2004). How to come up with a good research question: framing the hypothesis. Respiratory Care, 49(10), 1195-98.
	Artifacts: 1) In less than 500 words, submit a research question for a new project that you might complete after your fellowship.
Learning Objective 4C: Conduct a literature review on a research topic.	Readings: 1) South Central Healthcare Librarians (2007, March). The Literature Search Process: Protocols for Researchers (2 <sup>nd</sup> ed.)
	Artifacts: 1) Complete the Search Planning Form for a new project that you might complete after your fellowship.
Learning Objective 4D: Write a research study with a clearly stated hypothesis and choose an appropriate study design.	Readings:  1) Center for Evidence Based Medicine (2014). Study Designs. Retrieved from http://www.cebm.net/study-designs/
,	Artifacts: 1) Complete a biostatistics consultation with a designated faculty member (to be arranged via the Program Manager).
Guest Lecture on Conceptualizing Research Questions & Setting a Research Agenda Guest Lecture on Study Design & Data Analysis	



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<b>.</b> •	Competency 5:	
•	nd apply leadership skills for managing a research project team	
Learning Objective 5B: Cultivate strong project managements skills.	Readings:  1) Complete: How Good Are your Project Management Skills? Quiz <a href="http://www.mindtools.com/pages/article/newPPM">http://www.mindtools.com/pages/article/newPPM</a> 60.htm  Artifacts:  1) Participate in the guest lecture on Program Management.	
	<ul> <li>2) In less than 1 page, provide a written reflection on these questions:</li> <li>What makes a project successful?</li> <li>What project management skills are you good at?</li> </ul>	
	What skills do you need to develop?	
Learning Objective 5C: Demonstrate an understanding of teamsmanship.	Readings:  1) Bruhn, JG (1995). <u>Beyond discipline: creating a culture for interdisciplinary research</u> . Integrative Physiol Behav Sci, 30(4), 331-41.	
	Artifacts: Cite an example of an exemplary team that you have observed and an example of a problem that arose and how it was dealt with. In one page or less, state what made them particularly successful?	
Learning Objective 5D: Demonstrate conflict resolution skills and understand how cultural differences between investigators (i.e. those in the North and those in the South) or between investigators and their patients can impact research.	Readings:  1) Skelton, JR, Kai, J, & Loudon, RF (2001). Cross-cultural communication in medicine: questions for educators. Medical Education, 35, 257-261.  2) Ni, P (2013). Ten Strategies for Handling Aggressive or Problem Personalities. Communication Success, 260.  Artifacts:  1) Case, P (1981). Communication Styles: A Self-Assessment Exercise. Teaching for the Cross-Cultural Mind, SIETAR, Washington, DC.  2) Write a short reflection on your communication style. Do you approach individuals (e.g. co-workers, patients, collaborators) in the work setting differently based on their gender, ethnicity, or cultural background? Would others agree with you? How do you know?	
Prompts for Competency 5 Gro	un Discussion:	

#### **Prompts for Competency 5 Group Discussion:**

• Are investigators from low-resource settings perceived differently than investigators from high-resource settings? If so, what are some of the contributors to these differences? When and how might differences need to be addressed?

#### **Guest Lecture on Project Management**



Competency 6:	
Communicate Research Results  Learning Objective 6A: Readings:	
Demonstrate proficiency at scientific writing.	1) Feeser, VR, Simon, JR (2008). The ethical assignment of authorship in scientific publications: Issues and guidelines. Acad Emerg Med, 15(10), 963-969. 2) Wells, WA (2004). Me write pretty one day: How to write a good scientific paper. J Cell Biol, 165(6), 757-758.
	Artifacts:
	1) Identify an appropriate journal for submitting your research manuscript.
	<ul> <li>2) Complete an outline of a draft manuscript based on your research findings that can be submitted to a peer-reviewed journal upon completion of data analysis.</li> <li>3) Provide a brief essay (&lt; 1 page) regarding the international norms and policies for the determination of authorship and provide your authorship plan for</li> </ul>
	manuscripts published under your fellowship.
Learning Objective 6B: Demonstrate proficiency at scientific presentations.	Readings: Pierson, DJ (2004). How to write an abstract that will be accepted for presentation at a national meeting. Respiratory Care, 49(10), 1206-12.  Artifacts:  1) Complete a 10-minute presentation to the consortium on your personal background and fellowship research.  2) Write a succinct 2000 character abstract based on your Fogarty research project for presentation at a national meeting.
Learning Objective 6C: Cultivate communication skills with non-scientific communities.	Readings:  1) Graveline, D (2013, February). Seven Ineffective habits of scientists who communicate with public audiences. Retrieved from http://www.dontgetcaught.biz/2013/02/7-ineffective-habits-of-scientists-who.html  2) Marshall, M (2012, June). Talk Nerdy to Me. Presented as a TedTalk. Retrieved from http://www.ted.com/talks/melissa_marshall_talk_nerdy_to_me  Artifacts:  1) In less than half a page, explain your research to a non-scientific
Learning Objective 6D:	audience.  Readings:
Provide meaningful critique of peer publications and	1) Cummings, P, & Rivara, FP (2002). Responding to reviewers' comments on submitted



presentations.	articles. Arch Pediatr Adolesc Med, 156, 105-7.
	Artifacts:  Prepare written critiques of two scientific documents (e.g. papers, abstracts, grant proposals) assigned by the mentors. Ideally, this might include review of a paper a mentor was asked to review for a journal.
Learning Objective 6E: Utilize strong networking skills at a scientific meeting.	Readings:  1) WebGURU. How do I Network? Retrieved from http://www.webguru.neu.edu/mentoring-issues/networking/how-do-i-network  Artifacts:  1) What is your "elevator speech" to succinctly convey your research interests in 1-3 minutes  2) Create a list of 3-5 individuals (names, positions, emails) who you would like to contact regarding research or professional development.
Learning Objective 6F: Understand how to influence public policy through research.	Readings:  1) Work Group for Community Health and Development (2014). Section 10: Conducting Research to Influence Policy. Community Tool Box. Retrieved from http://ctb.ku.edu/en/table-of-contents/advocacy/advocacy-research/influence-policy/main  2) The Women's and Children's Health Policy Center (2012). Writing Policy Briefs: A Guide to Translating Science and Engaging Stakeholders. Retrieved from http://www.jhsph.edu/research/centers-and-institutes/womens-and-childrens-health-policy-center/de/policy_brief/index.html
	Artifacts: 1) Participate in a guest lecture from a Public Policy faculty member 2) Identify 2 local officials who have an interest in your research area. 3) Write a one page "Policy Brief" for an elected official on the subject of your research area.

#### Prompts for Competency 6 Discussion:

- What ways can scientists influence policy?
- What examples have you seen of policy being misinformed by research?
- What mistakes do people make at scientific conferences and what strategies can correct those mistakes?

#### **Guest Lecture from Public Policy Faculty**



	Competency 7:	
Understand Responsible Conduct of Research & Collaborative Practices		
Learning Objective 7A:	Readings:	
Complete an institutional	1) Boston University Institutional Review Board. <u>Tips for Creating a Consent</u>	
review board application	<u>Document</u> . Retrieved from	
	http://www.bu.edu/irb/guidance-and-faqs/submission-guidance/tips-for-	
	<u>creating-a-consent-document/</u>	
	2) University of Washington Human Subjects Division (2015). Quick Tips from	
	HSD. Retrieved from	
	http://www.washington.edu/research/hsd/quick_tips/	
	Artifacts:	
	Submit an IRB application	
<b>Learning Objective 7B:</b> Explain	Readings:	
the concept of research ethics	1) Beecher, HK (1966). Ethics and Clinical Research. New Eng J of Med, 274(24),	
& integrity.	1354-1360.	
	2) Bhutta, ZA (2002). Ethics in international health research: a perspective from	
	the developing world. Bulletin of the World Health Organization, 80(2), 114-120.	
	Artifacts:	
	1) Complete Responsible Conduct of Research Training.	
	2) Review the case study and answer these questions in a Word document:	
	<ul> <li>What were the pressures that contributed to the problem?</li> </ul>	
	<ul> <li>What cultural or institutional practices could have changed the outcome</li> </ul>	
	of the case study?	
	of the case study:	
Prompts for Competency 7 Disc	Prompts for Competency 7 Discussion:	

#### **Prompts for Competency 7 Discussion:**

- Case Study Discussion utilizing responses to the artifacts from 7B
- What ethical dilemmas might a Fogarty trainee encounter during fellowship? How could individuals respond to these challenges?



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	Competency 8:
La surrium Objective OA	Cultivate professional and personal development
Learning Objective 8A: Develop a strong NIH Biosketch & Curriculum Vitae	Readings: 1) Vermund, S. <u>Developing Biosketches</u> . PowerPoint. 2) Joy, S (2013, November 1). Academic CVs: 10 irritating mistakes. <u>The Guardian</u> . Retrieved from
	http://www.theguardian.com/higher-education- network/blog/2013/nov/01/academic-cv-job-10-mistakes 3) (optional) Gleason, C. <u>CV Best Practices, NIH Bio-Sketches, and Negotiating Job Offers</u> . Presented Mar. 5, 2015.
Learning Objective 8B: Utilize social media and technology for career development.	Artifacts:  1) Develop an NIH Bio-Sketch & an Academic CV and review it with the Program Manager Optional templates to use: Academic CV, Pre-doc Biosketch, Post-doc Biosketch Readings: 1) Rhode, J. Beyond a Trend: How Scientists Use Social Media. Powerpoint. 2) Bik, H. (2013, April 23). An Introduction to Social Media for Scientists. PLOS Biology. Retrieved from http://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.1001535 3) Erickson, M. How to Use the Slide Master to Create Templates in PowerPoint. PowerPoint.
	Artifacts:  1) Create a template in PowerPoint that you can use in a future presentation using the Master Slide technique.
Learning Objective 8C: Negotiate academic appointments or job offers.	Readings:  1) Mintz, S. Negotiating Your First Job Offer. Retrieved from <a href="http://www.columbia.edu/cu/tat/pdfs/negotiating.pdf">http://www.columbia.edu/cu/tat/pdfs/negotiating.pdf</a> 2) Ernst, M (2014). Getting an Academic Job Retrieved from <a href="http://homes.cs.washington.edu/~mernst/advice/academic-job.html">http://homes.cs.washington.edu/~mernst/advice/academic-job.html</a> 2) Participate in the Guest Lecture
	Artifacts: 1) Conduct a search for a post-fellowship position. Provide the Program Manager with the job listing of a position you would be interested in and discuss the opportunity with your mentor.
Learning Objective 8D: Explain good mentorship & develop mentorship skills.	Readings:  1) Makerere Mentorship Committee. MakCHS Mentorship Program. PowerPoint.  2) Zunt, J. Integration and Institutionalization of Mentorship Training. Powerpoint.



	Artifacts:
	1) Complete your Mentorship Compact & Quarterly Mentor Encounter Forms.
Learning Objective 8E:	Readings:
Develop strong time- management skills and a work-	1) UCLA Diversity and Faculty Development. Balancing Work & Life as an Assistant Professor. Retrieved from
life balance.	https://faculty.diversity.ucla.edu/resources-for/work-life/family-friendly-
life balance.	academy/balancing-work-and-life-as-an-assistant-professor
	2) Parvizi, J (2011, December). Balancing Life as a Clinician Scientist. Amer Acad Ortho Surg Now. Retrieved from
	http://www.aaos.org/news/aaosnow/dec11/research3.asp
	3) Schwingshackl, A (2014). The fallacy of chasing after work-life balance.
	Frontiers in Pediatrics, 2(26), 1-3.
	Artifacts:
	1) Conduct a self analysis and answer these questions:
	How do you currently spend your time?
	Ideally, how would you like to spend your time?
	<ul> <li>What areas are currently demanding more of your time than you would like?</li> </ul>
	<ul> <li>What is your timeline for delegating more time to items you feel are receiving less of your time?</li> </ul>
	<ul> <li>How will you communicate your priorities to others?</li> </ul>
	<ul> <li>Which areas of your life contribute the most to your stress level? What</li> </ul>
	can you do to mitigate these stressful situations?
	can you do to miligate these stressful situations:
Prompts for Competency 8 Disc	lission:

#### **Prompts for Competency 8 Discussion:**

- What type of mentor would you like to be?
- Discussion of self reflection activities for competency 8E.

**Guest Lecture of Negotiating Academic Appointments/Career Development**