

# GLOBAL AND ECOLOGICAL HEALTH ENGINEERING CERTIFICATE

The following requirements are in addition to, or further elaborate upon, those requirements outlined in The Graduate School Policy Guide (<https://catalogs.northwestern.edu/tgs/academic-policies-procedures/>).

## Certificate

**Total Units Required:** 5

### Course Requirements:

Course	Title
<b>Core Courses</b>	
BMD_ENG 395-0	Topics in Biomedical Engineering (Global and Ecological Health Challenge)
CIV_ENV 368-0	Sustainability: The City
Plus 399 in the appropriate department	
<b>Electives (two of the following)*</b>	
<i>Biomedical Electives</i>	
BMD_ENG 304-0	Quantitative Systems Physiology
BMD_ENG 353-0	Bioelectronics
BMD_ENG 306-0	Quantitative Systems Physiology
BMD_ENG 317-0	Biochemical Sensors
BMD_ENG 343-0	Biomaterials and Medical Devices
BMD_ENG 495-0	Special Advanced Topics in Biomedical Engineering (Biointerfaces – Medical Devices)
<i>Environmental Engineering Electives</i>	
CIV_ENV 361-1	Environmental Microbiology
CIV_ENV 361-2	Public & Environmental Health
CIV_ENV 364-0	Sustainable Water Systems
CIV_ENV 365-0	Environmental Laboratory
<i>Global Health Electives</i>	
GBL_HLTH 390-0	Special Topics in Global Health (Achieving Global Impact through Local Engagement)
Health Technology Management (offered at University of Cape Town, South Africa)	

\* By design, students will be encouraged to select courses from outside their MS discipline. Biomedical Engineering students should take electives from Environmental Engineering and Science. Environmental Engineering and Science students should take electives from Biomedical Engineering. Both groups may take Global Health electives.