Michigan Technological University
Minor in Humanitarian Engineering
Program Code ECHM, Academic Year 2026-2027
Department of Civil, Environmental, and Geospatial Engineering
Minimum Credits Required: 18

International and Community Development Engineering: 9 credits

Required Core Course

- CEE 4993 Engineering with Developing Communities (3) *Prereqs: BE3350 or CM3110 or CEE3200 or MEEM3201*

Required Engineering Capstone Design/Enterprise Experience: 3 credits

Complete 3 credits of capstone design experience, under the appropriate capstone course number for the student's degree program, that align with a prominent sector of international and community development work (e.g., health, environment, or economic development). The capstone experience must be approved by the minor advisory committee to ensure it involves collaboration with an underserved community, or at least extensive and documented consideration of the needs, resources, and constraints of such communities. Does not include CEE4915.

Elective Engineering Courses: Choose one course for 3 credits

- CEE 4915 International Engineering Field Experience (3) *Prereqs: none*
- CEE 4993 Engineering with Developing Communities (3) *Prereqs: Prereqs: BE3350 or CM3110 or CEE3200 or MEEM3201*
- ENG 4515 Introduction to Sustainability and Resilience (3) *Prereqs: none*
- GE 4150 Natural Hazards (3) *Prereqs: GE2000 or GE2100*
- HF 2000 Introduction to Engineering Psychology (3) *Prereqs: none*
- HF 3850 Human Factors (3) *Prereqs: (HF2000 or PSY2000) and UN1015*

Intercultural Sensitivity and Community Engagement: 9 credits

Required Core Course: Choose one course for 3 credits

- SS 3960 Cultural Immersion (3) *Prereqs: UN1015*
- SS 3961 Preparing for Cross-Cultural Immersion Experiences (3) *Prereqs: UN1015*
- SS 4120 Sustainable Development (3) *Prereqs: UN1015*
- SS 4700 Communities and Research (3) *Prereqs: UN1015*
- SS 4710 Geographies of Migrant Communities (3) *Prereqs: UN1015*

Electives: Choose two courses for 6 credits

- FW 3760 Human Dimensions in Natural Resources Stewardship (3) *Prereqs: none*
- GE 2100 Environmental Geology (3) *Prereqs: none*
- HU 2820 Communication & Culture (3) *Prereqs: none*
- HU 3261 Communicating Across Cultures (3) *Prereqs: UN1015*
- HU 3262 Topics Francophone Cultures (3) *Prereqs: UN1015*
- HU 3264 Topics Spanish-Speaking Cultures (3) *Prereqs: UN1015*
- HU 3265 Topics East Asian Cultures (3) *Prereqs: none*
- HU 3294 Topics in Hispanic Literatures and Cultures (3) *Prereqs: HU3293*
- HU 4625 Risk Communication (3) *Prereqs: UN1015*
- SS 2100 Intro to Cultural Anthropology (3) *Prereqs: none*
- SS 2300 Environment and Society (3) *Prereqs: none*
- SS 2400 Intro to Human Geography (3) *Prereqs: none*
- SS 2700 Introduction to Sociology (3) *Prereqs: none*
- SS 3105 Native American and Indigenous Communities (3) *Prereqs: UN1015*
- SS 3110 Food Systems and Sustainability (3) *Prereqs: UN1015*
- SS 3260 Latin American Cultural History (3) *Prereqs: UN1015*
- SS 3315 Population, Health, and Environment (3) *Prereqs: UN1015*
- SS 3961 Preparing for Cross-Cultural Immersion Experiences (3) *Prereqs: UN1015*
- SS 3750 Social Inequality (3) *Prereqs: UN1015*
- SS 3805 Environmental Justice (3) *Prereqs: UN1015*
- SS 3960 Cultural Immersion (3) *Prereqs: UN1015*
- SS 4120 Anthropology of International Development (3) *Prereqs: UN1015*
- SS 4200 Environmental Anthropology (3) *Prereqs: SS2100 and UN1015 and UN1025*
- SS 4700 Communities and Research (3) *Prereqs: SS2100 and UN1015*