



## Humanitarian Engineering, Science and Technology (HEST) Minor Advising Sheet AY21-22

The Humanitarian Engineering (HEST) minor requires a minimum 27 credits of related coursework, including: 1) 12 credits from four core courses, 2) 12-15 credits of thematic electives, and 3) an international or service learning component. Thematic elective credits can be double-counted toward Bacc Core requirements. The service learning component can be completed in the U.S.,

including through the on-campus HEST310 course or other volunteer or co-curricular activities. Be sure to consult with the HEST advisor regarding your choice of thematic electives. To fill out a minor declaration form or ask additional questions of an adviser; contact Brett Jeter through email at [brett.jeter@oregonstate.edu](mailto:brett.jeter@oregonstate.edu). You may also contact Dr. Nordica MacCarty [Nordica.maccarty@oregonstate.edu](mailto:Nordica.maccarty@oregonstate.edu) with questions about overrides or course recommendations. My Degrees does not appear to accurately represent progress towards the minor, please contact Mr. Jeter to help align your completion of the requirements in MyDegrees.

The minor curriculum is undergoing a revision to allow more flexibility. In the meantime, Dr. MacCarty can sign off on appropriate overrides based on course availability.

Course Number	Course Title	Term(s) Offered	Credits
<b>1) HEST Core (12 credits). Note that HEST Core Electives can be substituted for core credits if core courses are not offered in an academic year.</b>			
<b>ANTH/HEST 201</b>	Innovation for Social Impact	W22	3
<b>HEST 412/512</b>	*Multidisciplinary Case Studies in Humanitarian Engineering, Science and Technology	Sp22 Ecampus	3
<b>HEST 320</b>	Engineering for Global Health Solutions	F22 Ecampus	3
<b>HEST 462/562</b>	System Dynamics Modeling for Humanitarian Engineering	Su22 Ecampus	3
<b>2) Elective Courses (12-15 credits in any of the following elective categories)</b> <sup>Note 1</sup>			
Any HEST-designated course, HEST core elective or Thematic Tracks in the rows below (Bacc Core denoted by *), or List I or List II options below the table (which all double-count for Bacc Core) may be taken to fulfill this elective portion. Thematic electives must represent 13 credits beyond the 12 credit core. <i>Additional courses outside HEST, List I or List II may be approved as a thematic elective based on relevance to HEST and the student's interests. Approval may be granted, for example, for courses in political science, public health, anthropology, engineering, economics, business, geography, agriculture or others.</i>			
<b>HEST Core Electives</b>			
<b>ANTH 482/582</b>	*Anthropology of International Development	F22 Ecampus	
<b>BA 362</b>	Social Entrepreneurship and Social Initiatives	F22 Ecampus	
<b>HEST 241</b>	Household Energy in Guatemala (Background)		1
<b>HEST 242</b>	Household Energy in Guatemala (Field)		3

See notes 1-2 on back page.

<b>Sustainability Track</b>			
<b>GEOG 300</b>	*Sustainability for the Common Good		3
<b>GEOG 331</b>	*Population, Consumption, and Environment		3
<b>PPOL 447</b>	Integrated Policy: Food, Energy, Water, and Climate		4
<b>Public Health Track</b>			
<b>ANTH 374</b>	*Anthropology and Global Health		3
<b>H 333</b>	*Global Public Health		3
<b>HDFS 447</b>	*Families and Poverty		4
<b>Project Management Track</b>			
<b>AEC 250</b>	*Intro to Environmental Economics and Policy		3
<b>BA 354</b>	^Managing Ethics and Corporate Social Responsibility		4
<b>LEAD 342</b>	*Team and Organizational Leadership		3
<b>NMC 280</b>	Global Media		3
<b>NMC 311</b>	Introduction to Nonprofit Management		3
Any of the Electives listed in Table 2 below.			
<b>3) International or Service Learning Component (0-3 credits)</b> <sup>Note 2</sup>			
Study abroad, HEST 310, HEST 444, internship, <a href="#">Engineers without Borders</a> , <a href="#">Grand Challenge Scholars Program</a> , or other service learning / civic engagement as approved by an academic advisor. Past opportunities listed below and offerings change annually but we encourage you to look for related opportunities and ask for approval to count it towards this minor requirement. International travel is not required.			
HEST 310	Intro. Community Engagement/Design Bacc Core: Sci/Tech/Soc	F23	3
HEST 444	Co-Design for Development: A Remote Collaborative Experience		2
HEST 242	Summer Field Work Guatemala	Summer	3
INTL 299	Information and Global Social Justice: Italy	Summer	3
BA 199/362/407	Social Entrepreneurship in Uganda	Summer	1-4

Class credits cannot be counted toward more than one category requirement. All classes for the minor must be taken for a letter grade (A-F grading) with a min. grade of C. Recommended Organization: Engineers Without Borders- <http://groups.engr.oregonstate.edu/ewb/>

Notes:

\* Denotes Bacc Core course

- 1) All credits, including MUS 108, can only be repeated once to count towards this minor.
- 2) Participation in the courses listed automatically satisfies the requirement. To satisfy this requirement using any other means, students will complete the HEST experiential learning form and obtain advisor approval or approval from Dr. MacCarty communicated to the advisor prior to the study abroad, EWB, or other service-learning activity.

**Table 2. Additional elective options associated with the baccalaureate core**

<p><b>List I</b> These classes are particularly recommended because of the relevance of material and/or instructor affiliation with the program.</p> <p><b>Cultural Diversity:</b> WGSS 280 <b>Lit &amp; Arts:</b> ENG 322 <b>Physical Science:</b> WSE 210 <b>Social Processes:</b> H 225; WGSS 223 <b>Western Culture:</b> PHL 205 <b>DPD:</b> ENG 220; FW 340; GEO 309; MB 330; WGSS 223; WGSS 414 <b>Contemporary Global Issues:</b> ANTH 374; ANTH 380; ANTH 466; FW 325; GEO 300; GEO 308; GEO 330; GEO 350; HDFS 447; PHL 443; PS 345; PS 458; SOC 480; SUS 350; WGSS 380; WGSS 480; Z 349 <b>Science, Tech, &amp; Society:</b> ANTH 330; ANTH 481; ATS 320; WSE 415; ENGR 350; ES 445; GEO 300; GEO 306; SOIL 335; H 445; IE 380; NUTR 312; PH 313; SOC 481; WGSS 440</p>	<p><b>List II</b> Additional choices to fulfill thematic elective credits for the minor are listed below.</p> <p><b>Biological Science:</b> BOT 101. SOIL 205 <i>and</i> SOIL 206; SUS 102. <b>Cultural Diversity:</b> ANTH 210; ANTH 311; ANTH 313; ANTH 314; ANTH 315; ANTH 316; ANTH 317; ANTH 318; ANTH 319; ES 101; ES 231; ES 241; GEO105; GEO 327; HST 351; HST 391; HST 392; JPN 331; MUS 108; NUTR 216; REL 160; PHL 315 <b>Literature and the Arts:</b> ENG 210; ENG 212; ENG 213; ENG 260; ENG 322; ES 334; ENG 210; ENG 212; ENG 213; ENG 260; ES 334 <b>Physical Science:</b> GEO 221 <b>Social Processes and Institutions:</b> AREC 250; ANTH 110; ECON 201; ECON 202; H 225; PS 205; SOC 204; SOC 205; WGSS 224 <b>Western Culture:</b> AEC 253; GEO 106; GEO 326.</p>
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