| **Global Learning Student Learning Outcome Addressed** | **Assessment Method** | Assessment Results |
| --- | --- | --- |
| **Global Awareness:** Students will be able to demonstrate knowledge of the interrelatedness of local, global, international, and intercultural issues, trends, and systems. | **Assessment Activity/Artifact:**  Students will be required to read articles, papers, reports, books, online resources on worldwide impact of hurricanes (hurricanes/cyclones/typhoons). They will investigate effects of climate change on hurricane frequency and intensity. Student groups will produce a Wiki (including images, videos, media) and make short oral presentations on selected problems (e.g., worldwide impact of hurricanes; relation to climate change/global warming) to demonstrate their understanding of the interrelatedness of engineering and socioeconomic global impacts of hurricanes and associated multi-stressors (wind, rain, flood, surge, wave, etc.).  **Evaluation Process:**  The performance evaluation will be based on articulation of global awareness via two artifacts (Wiki and oral) using a 20-point rubric (10 points each for the Wiki and the oral presentation). Question and answer session will follow each presentation to evaluate the understanding of individual student. Peer evaluations will be done for group assignments (Wiki and oral presentation).  **Minimum Criteria for Success:**  Student will require a 70% or higher based on the Wiki and performance during the oral presentation.  **Sample:**  All students will be assessed individually. | *To be entered after each time course is taught* |
| **Course Learning Outcome** |
| Students will demonstrate an understanding of (i) the interrelatedness of hurricane (hurricane/cyclone/typhoon) impacts around the world, (ii) hurricane related engineering/socio-economic problems that have no regional or national borders, and (iii) the extent to which these problems are affected by increasing human population along the coasts as well as by different technological and socioeconomic aspects and interdependencies of critical infrastructure. |
| **Use of Results for Improving Student Learning** | | |
| *To be entered after each time course is taught* | | |

| **Global Learning Student Learning Outcome Addressed** | **Assessment Method** | Assessment Results |
| --- | --- | --- |
| **Global Perspective:** Students will be able to conduct a multi-perspective analysis of local, global, international, and intercultural problems. | **Assessment Activity/Artifact:**  Students have to conduct multi-perspective analyses (e.g., analyzing ‘Vulnerability of low-rise structures,’ ‘Vulnerability of lifeline elements,’ ‘Interdependencies of various systems under hurricane impacts,’ ‘Transformation of building codes worldwide’) to estimate impacts of hurricane multi-stressors on built/natural environment. They will analyze how perspectives compare/contrast and overlap/differ based on geographic regions with different political environment, building codes, etc. Each student group will produce a Wiki; the artifact will require all students to participate. The groups will also present their analyses in the class.  **Evaluation Process:**  The Wiki and presentation will be evaluated based on accuracy, depth, and demonstration of multi-perspective analyses of local, global, international, and intercultural problems related to hurricanes. Both the Wiki and oral presentation will be evaluated using a 30-point rubric (15 points for each). Question and answer session will follow each presentation to evaluate the performance of individual student. Peer evaluations will be done for group assignments (Wiki and oral presentation).  **Minimum Criteria for Success:**  Student will require a 70% or higher based on the Wiki and performance during the presentation.  **Sample:**  All students will be assessed individually. | *To be entered after each time course is taught* |
| **Course Learning Outcome** |
| Students will be able to conduct multi-perspective analyses of the multi-stressor impacts of hurricanes on communities around the world. Also, the students will be able to evaluate the extent to which interrelatedness of engineering and socioeconomic factors and interdependencies of critical infrastructure contribute to those impacts. |
| **Use of Results for Improving Student Learning** | | |
| *To be entered after each time course is taught* | | |

| **Global Learning Student Learning Outcome Addressed** | **Assessment Method** | Assessment Results |
| --- | --- | --- |
| **Global Engagement:** Students will be able to demonstrate willingness to engage in local, global, international, and intercultural problem solving. | **Assessment Activity/Artifact:**  Final group presentation will focus on willingness to engage in problem solving approaches to minimize hazard impacts on communities. This will also cover the aspects of media's role in understanding hurricane impacts, solutions, and readiness. The presentation topics will be related to innovative approaches for developing *hurricane resilient communities* around the world. Example topics: “How would you reduce building damage from a future *Andrew*-strength hurricane,” “Best practices to survive *Katrina*-level storm surges,” “What is your duty to reduce loss of life in Bangladesh from future *Cyclone Sidr,*” “What measures would you take to reduce vulnerability of Haitians to hurricanes,” “What mitigation measures could you have taken to reduce the impact of Cyclonic Nargis on Burma,” “How media can facilitate communication between people, government , non-governmental organizations (NGOs),” etc.  **Evaluation Process:**  Individual student reflection on willingness for reducing vulnerability of communities will serve as the assessment tool. Students will comment on their personal and professional philosophy for preparedness and disaster mitigation. Feasibility and cost-effectiveness of their mitigation solutions will also be assessed in the evaluation process. The solutions must be global (applicable to different regions, e.g., Miami vs. Haiti vs. Burma, and different problems, e.g., how retrofitting for hurricanes can help reduce tornado damage). Open ended reflective questions will be asked to evaluate the willingness and motivation of individual student for disaster mitigation. Presentation will be evaluated using a 20-point rubric. Peer evaluations will be done for group presentations. In addition, to measure the impact of the course on students philosophy the instructor will survey students using a Likert scale (e.g., 1 = no change in philosophy, 2 = some change, 3 = significant change). This will not be graded.  **Minimum Criteria for Success:**  Student will require a 70% or higher based on the performance during the presentation.  **Sample:**  All students will be assessed individually. | *To be entered after each time course is taught* |
| **Course Learning Outcome** |
| Students will demonstrate their willingness to develop engineering solutions or technologies that reduce adverse impacts of hurricanes (with some application to non-hurricane winds) and develop more sustainable communities. Such solutions or technologies should be applicable at national, regional, and global levels and appropriate within the framework of engineering and socioeconomic factors. |
| **Use of Results for Improving Student Learning** | | |
| *To be entered after each time course is taught* | | |