**New York City College of Technology**

**Interdisciplinary Committee**

**Course Review Form**

**DATE:** April 14, 2015

**REVIEWER:** Aida Egues

**COURSE TITLE & NUMBER:** PHYS 1002: An Introduction to the Physics of Natural Disasters

**PROPOSED BY:** Prof. Reginald Blake

**CREDIT HOURS:** 3 Credit Hours

**PREREQUISITES:** Pre- and co-requisite: MAT 1190

**COURSE IS: X** Existing New In development

**PROPOSED COURSE DESIGNATION**: **X** College Option elective Capstone other:

**DEPARTMENT HOUSED IN:** Physics

**PROPOSED STRUCTURE (e.g., co-taught, guest lecture, LC, other):**  Guest Lecturer(s), minimally 20% of total course meetings.

**CREDIT DISTRIBUTION** (if co-taught): N/A

**CATALOG DESCRIPTION:**  This geophysics course for non science majors focuses on natural disasters and the dynamic Earth processes that control them. It integrates the principles of geology, meteorology, climatology, oceanography, and astronomy to provide rudimentary understanding of geophysics. Students learn about the nature, causes, risks, impacts, and prediction of natural disasters including hurricanes, earthquakes, volcanoes, tsunamis, and climate change. Laboratory exercises are incorporated with class work to illustrate and supplement the lecture material.

**DESCRIBE & EVALUATE HOW COURSE MEETS INTERDISCIPLINARY CRITERIA.**

Natural disasters are ubiquitous and so have relevance and impact across a broad spectrum of societal domains from energy and infrastructure to basic survival. The scope and depth of the topics covered in this geoscience course are comprehensive and interdisciplinary in nature. To elucidate the interdisciplinary subject matters of this course, connections will be drawn and integrative knowledge will be dispensed and applied from across disciplines, including architecture, civil engineering, and electrical engineering. Additionally, this course will assimilate and apply the pedagogical approaches and techniques that are intrinsic to the disciplines of architecture, civil engineering, electrical engineering, geology, hydrology, meteorology, and physics. The use of group projects with facilitate that students learn to think critically, communicate effectively, and work collaboratively. The overall nature of the course will encourage students to become flexible thinkers.

**DESCRIBE & EVALUATE THE INTERDISCIPLINARY STRUCTURE.**

Natural disasters are ubiquitous and so have relevance and impact across a broad spectrum of societal domains from energy to infrastructure to basic survival. The scope and depth of the topics covered in this geoscience course are comprehensive and interdisciplinary in nature. To elucidate the interdisciplinary subject matters of this course, connections will be drawn and integrative knowledge will be dispensed and applied from across disciplines such as that of architecture, civil engineering, and electrical engineering.

**DOES COURSE MEET REQUIREMENTS FOR GENERAL EDUCATION?**

Yes, this course meets the requirements for general education. The activities and the structure of this course will guide students to the attainment of each component of the General Education learning goals outlined above. These learning goals are all congruent to - and consistent with - the scope, expectations, and deliverables of the course.

**STRENGTHS:** This is a well-conceived course that integrates a variety of disciplines to address a complex global issue of natural disasters from numerous approaches. The course is complex and requires that students become citizen scientists potentially transforming how they view the world in which they live as well as their role in that world. This course could easily adapt to include other branches of science and/or disciplines such as economics, political science, as well as the medical fields or medical professions.

**WEAKNESSES:** N/A