

One Health Education

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There is compelling evidence that our planet is in peril. Human, wildlife and domesticated animal populations face growing health risks from such things as climate change, population growth, zoonotic pandemics and increased urbanization. These health risks are impacted by local and global environmental factors.

One Health is a collaborative effort of multiple disciplines working locally, nationally, and globally to attain sustainable optimal health and well-being for humans and animals. It is the intersection and inextricable link between human health and animal health, and the connections between health and natural and man-made environments. For many individuals, implementing One Health concepts and their related socioeconomic impacts is a cultural, behavioral and paradigm shift. Many One Health concepts are driven by socioeconomic issues which include, but are not limited to: population growth; nutritional, agricultural, and trade practices; globalization; shift in land use; accelerated urbanization; deforestation; encroachment on wildlife; and climate change.

Now is the time for academic institutions to step forward in leading new One Health initiatives to create impactful, relevant research-driven solutions and train the next generation of innovative leaders. One Health concepts are ideally suited to provide robust, system-wide health-related solutions that the global society will need and expect. There is an enormous unrealized potential for all schools/colleges on a campus or amongst campuses to collaborate and leverage their strengths to solve many of society's most important One Health issues such as prevention and treatment of obesity in humans and animals, infectious and zoonotic diseases that threaten global peace and security, health care costs and the need to adopt wellness programs, and safe and nutritious food and water for the world's growing population—just to name a few.

Universities with transdisciplinary programs have opportunities to take leadership positions by being at the forefront of One Health education. Educational "business as usual" will be for followers; an action-oriented sense of urgency will be created by futuristic educational leaders. One Health concepts fit easily in the curricula of health-related professions; although, it may be a bit more challenging to incorporate these concepts into the curricula of other schools/colleges because they are not thought of in an intuitive manner. This is a challenge, but once it is conquered yields so many benefits for students and society.

One Health concepts and case studies could effectively be incorporated into current curricula, with examples and impacts discussed in teaching models, assignments, and high-impact

projects throughout many disciplines including those outside the traditional health sectors. Unique opportunities exist for the integration and incorporation of One Health-related concepts throughout the undergraduate, graduate, and professional programs; in other words integrate One Health concepts throughout the University curriculum, where appropriate.

At the heart of the One Health initiative is the role of engaging students in educational opportunities around a team concept. It is important to identify opportunities whereby teaching students from various disciplines and colleges can form teams. Team approaches involving people with different, yet complementary, skills and experiences provide synergy in addressing complex, important societal needs. It is essential that students learn how to work collaboratively with colleagues across professions to address important societal issues involving health and wellbeing.

One Health transdisciplinary high-impact education experiential plans are ambitious and innovative, and may include: a certificate program, undergraduate learning community, new curricula for master's and doctorate degrees with students from varying disciplines learning together, "Core" One Health fundamentals on-line course, university-wide seminars, summer research exchange programs, externships with highly regarded research faculty members, federal government summer transdisciplinary team externships, international transdisciplinary programs and teams with global partners, and One Health/one classroom with students from various disciplines learning together. Students are keen to explore not only new knowledge, but also new models of learning and collaboration.

Faculty ask if they are going to be recognized and rewarded for working in transdisciplinary collaborative teams. They indicate that this is not the customary culture for many universities. However, given the right encouragement, recognition, and academic credit, faculties are poised to deliver.

***Note: Dr. Chaddock** is a longstanding extraordinary One Health expert, leader and Supporter/Advocate <http://www.onehealthinitiative.com/supporters.php>.