

## Transdisciplinary Course Modifications: A Guide to Implementation

---

**Rationale.** Current course offerings can be modified to include trans- and interdisciplinary components to introduce students to the multidisciplinary approach that is often required to understand complex topics and solve real world problems.

**Benefits.** Modification of existing courses to create transdisciplinary components allows for an enhanced learning environment with minimal investment of instructor time. Integrating transdisciplinary elements within existing courses creates a first step for students to explore, understand, and appreciate the value to education that crosses disciplinary silos. By modifying existing courses to include a wider perspective of the core subject, instructors may offer a more dynamic and engaging teaching environment that allows for a fuller understanding of central content, and students see the applicability of their learning in a more realistic environment.

**Logistics & Strategy.** The incremental nature of course modifications does not necessarily demand the addition of course instructors or outside experts. Faculty may draw upon their broader expertise which often exceeds the narrow nature of course content to bring in additional perspectives. For example, environmental biologists could discuss the economic impact of strategies designed to improve the global environment or present the social and economic costs of failing to tackle challenges related to pollution.

Dedicated lecture slots could be used to bring in external experts who can speak to course content from their unique perspective. For example, biomedical science disciplines could bring in a patient to present their experience or participate in a Q&A session with students. Similarly, local healthcare professionals could speak to the applied nature of course content, helping students see the practical nature of their learning.

**Student Perspective.** Students learn by connecting theories, ideas, and concepts across disciplines. Presenting these elements within a single course facilitates making these connections. Smaller doses of transdisciplinary teaching within an existing course creates a structured, supportive, and incremental learning environment that balances the desire by some students to extend their learning, and the hesitation of others who may not see the value in extracurricular content or lack confidence in their ability to move beyond what they already know.

Absorbing core content is a critical foundational step in learning, but in-depth understanding and problem solving requires the development of critical thinking skills. Transdisciplinary courses bring together different perspectives on an issue or topic, allowing students to make connections and identify unique challenges within a single issue. This small and subtle step in considering various viewpoints is a key element to developing a critical assessment tool.