

What TIGER Has to Offer: Improving STEM Teaching and Learning through Four Synergistic Activities

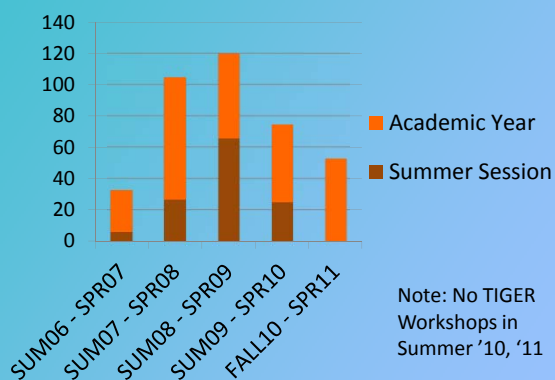


Adam J. Blanford, Angel Hoekstra, Laura L. B. Border
Graduate Teacher Program, University of Colorado Boulder

TIGER Workshops

These workshops address discipline-specific pedagogical methods, the CIRTL Pillars, research methods, and professional development.

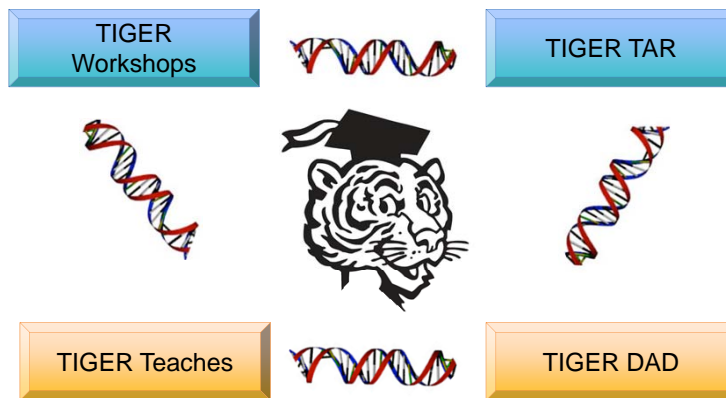
TIGER Workshop Attendance, 2006–10



From 2006–11, TIGER workshops were attended by 386 graduate students in 24 STEM departments/programs at the University of Colorado Boulder.

CIRTL Forum 2011, Madison, WI

Abstract: We show how TIGER activities improve STEM teaching and student learning at CU Boulder. TIGER activities reach out to students, develop interest in effective teaching, and help them learn analytical and assessment skills to promote a learner-centered environment. TIGER participation produces learner-centered teachers and research scientists who understand how students learn, and how to integrate the CIRTL pillars.



TIGER TAR

Participants develop Teaching-as-Research projects designed to assess student learning in undergraduate courses.

2010: 2 TAR Projects - Sociology, Geology
2011: 10 TAR Projects - Geography, Chemistry, Sociology, Engineering

Geography

Assessment of Learning in a Graduate-Level Pedagogy Course

Chemistry

Standardized Laboratory Glassware Demonstration for Students in CHEM 1114 (General Chemistry)

Engineering

Assessing Engineering Students' Understanding of Social Responsibility from Undergraduate and Graduate Education into Professional Life

TIGER Teaches

TIGER TAR and DAD scholars apply the CIRTL Pillars to projects in their disciplines. TIGER Team members meet on a regular basis with TIGER fellows to discuss their progress, answer questions, and offer critical feedback.

TIGER activities place the graduate student in the position of both learner and practitioner. Workshops educate about aspects of STEM, while TIGER Teaches sessions allow interaction within learning communities. TIGER TAR and TIGER DAD allow students to implement knowledge of research methods to contribute original scholarly work on STEM education. Thus, creative synergy is established between teaching and research.

TIGER DAD

This project assists STEM departments in the development of college pedagogy courses that integrate the CIRTL Pillars. Current TIGER DAD projects are in Atmospheric & Oceanic Sciences, Aerospace Engineering and Environmental Studies.

