COURSE ANNOUNCEMENT—SPRING 2013

GEOG 510

Tropical forest dynamics:
Linking function, biodiversity, and conservation

Instructor: Dr. Jennifer K. Balch

Day & Time: Tuesday/Thursday, 11AM-12:30PM,
(Walker 319)

Course Description:
Tropical forest ecosystems harbor most of the
world’s biological diversity and important carbon
stores, yet the challenges to maintain and
preserve these tropical ecosystems are many
and global in scope. These challenges require two-fold understanding of: i) fundamental
drivers and mechanisms maintaining tropical forest biodiversity and function, and ii) the
local to global-scale social, political, and economic drivers that threaten to substitute
these forests. The course will look in-depth at these two components to explore the
ecological thresholds of tropical forest systems and the opportunities where
environmental conservation and economic development goals can coincide.

This course has three major objectives: i) to introduce students to the major concepts
and theoretical questions in tropical forest ecology; ii) to discuss current anthropogenic
threats to tropical forests; and iii) to identify how ecological principles can inform
conservation objectives. Questions that will be addressed include: Why are there so
many species in the tropics? How much carbon do tropical forests store and how? What
drives land use and forest fragmentation? How will climate change, land use, and fire
combined influence tropical forests? What are some of the science-based solutions to
slow or reverse degradation of tropical forests?

The seminar will be based on readings of primary scientific literature, policy briefs, and
other material, and we will meet twice a week for two 90-minute lectures/discussions.
Grades will be primarily based on weekly participation, leading a discussion, and on a
term paper.

For more information, please contact:

Dr. Jennifer K. Balch
Department of Geography, 315 Walker
Email: jkbalch@psu.edu
Phone: 814-863-8571