

# Chapter 18

## Teaching about Sustainability: Raising Consciousness and Taking Action

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### ABSTRACT

*This chapter offers concrete recommendations for teaching a capstone course in sustainability to upper level undergraduates minoring in sustainability studies. Given the multifaceted nature of sustainability, the authors use a strong interdisciplinary framework. Because the two instructors are senior faculty from a scientific/technical field and a liberal arts perspective; the course is overseen by the university's academic sustainability program director, adding further breadth of input into student projects. This course comprises three distinct but interconnected components: (1) a theoretical element, i.e., reading and discussion that raises students' consciousness about advanced issues in sustainability and encourages critical thinking; (2) the use of cooperative learning teams in which students choose to solve a practical, real-world problem dealing with sustainability that forces them to be active learners; and (3) ten pedagogical strategies that are effective in motivating students to put forth their best efforts in working on their team projects dealing with sustainability.*

### ORGANIZATION BACKGROUND

Auburn University is a public land grant institution located in east-central Alabama in the Southeastern United States whose mission includes instruction, research, and outreach/extension. The student

body comprises circa 25,000 undergraduate, graduate, and professional students. While instruction has traditionally been the primary focus, an increasing emphasis has been strategically placed in recent years on sustainability issues at Auburn University, in terms of both academics and day-to-day operations. During 2012 the university participated in the Sustainability Tracking and

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Rating System (STARS) administered by the nationwide Association for the Advancement of Sustainability in Higher Education (AASHE), and earned a Silver rating (AASHE, 2013). Plans are to further strengthen the university's sustainability programs. Auburn University's 2013-2018 Strategic Plan was approved by the Board of Trustees in June 2013 and states that a strategic priority is to "Enhance the commitment to sustainability in our educational programs, research, operations, engagement and innovation, improving our AASHE sustainability score from 49 to at least 60". The capstone course we describe is an important tool to prepare our students to become leaders in efforts toward sustainability in the diverse careers that they will pursue after graduation.

## **SETTING THE STAGE**

The Auburn University Office of Sustainability was established in 2006 to develop both operational and academic programs on campus. In 2011 a new Director of the Office of Sustainability was hired to focus on sustainability operations under the supervision of the Facilities Division, and a faculty member was recruited to serve as part-time Director of Academic Sustainability Programs within the Office of Undergraduate Studies in the Provost Office. These two directors thus work under different branches of the university, but co-operate to fulfill the twin missions of sustainability on campus in terms of operations and academics. Since 2008, the University has offered an undergraduate minor in Sustainability Studies, which is open to all majors, and is supervised directly by Academic Sustainability Programs. Because this program is housed in the Provost Office, it is not affiliated with any specific college on campus, and so is administered in a truly interdisciplinary framework. The minor consists of 5 required courses: a broad Introduction to Sustainability course (either an honors or regular version), three electives that may be selected from a list of 45

approved electives offered by 16 departments in the areas of environment, society and markets (economic issues), and social justice (Auburn University, 2013), and finally, the Senior Capstone in Sustainability. The introductory course sets the stage for the minor, providing the basic concepts and principles about sustainability, and providing students with the foundational knowledge that they then use as they take their three elective courses. Finally, the capstone course provides students with the ability to apply what they have learned through the introductory and elective courses to real-world problems and situations. This type of capstone experience in which students complete applied projects has been recommended for inclusion in minor programs on sustainability in higher education (Stewart, 2010). The capstone course for the minor that we co-teach at Auburn University is the subject of our case history.

## **CASE DESCRIPTION**

This chapter deals with pedagogical issues related to teaching our capstone course in sustainability for junior and senior undergraduates. The capstone course has been offered during spring semester each year since 2009 for 3 upper division credit hours, to 15-25 students who are completing the sustainability minor while working in a wide diversity of academic majors on campus. The course is strongly interdisciplinary, and as such is co-taught by 2 faculty members: one each from the humanities and the sciences, and is supervised by the Director of Academic Sustainability Programs through the Provost Office (Auburn University, 2012). The interdisciplinary nature of this course, and the use of diverse pedagogical approaches, are both integral components of college-level sustainability teaching, as recommended by the Piedmont/Ponderosa workshop model that we use to train our faculty at Auburn (Bartlett & Chase, 2012).

Like Caesar's Gaul, our case history consists of three distinct but interconnected parts. In Part

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