SLS 3110: TECHNOLOGY AND SUSTAINABLE COMMUNITY DEVELOPMENT
Also listed as CS 3803 and SLS 3803

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COURSE DESCRIPTION:
When does technology improve communities? When doesn't it, and why? What else matters in the success or failure of technology-based projects? How can engineers and scientists improve their chances of having a positive long-term impact on communities? What role does public policy and the social sciences have to play? How is designing technology for communities different from designing technology for consumers? This course will explore the role of technology in the development of sustainable communities, locally and internationally. Through a combination of historical perspective, case studies, community engagement methods and practice, and critical evaluation techniques, students will develop an appreciation for the strengths and limitations of technology in sustainable community development and the skills needed to approach sustainable community issues drawing on engineering in context.

This course is part of Georgia Tech's Serve-Learn-Sustain (SLS) initiative, which provides students with opportunities inside and outside the classroom designed to help them combine their academic and career interests with their desire to improve the human condition, allowing them to help build healthier, more sustainable communities where people and nature thrive. More information about SLS can be found at www.serve-learn-sustain.gatech.edu. Visit the website to sign up for the SLS listserv and find links to Facebook, Instagram and Twitter.

OBJECTIVES AND LEARNING OUTCOMES (in italics):
1. Basics of sustainability: *Students will be able to identify relationships among ecological, social, and economic systems.* This triad forms the basis of sustainability. The course will examine multiple examples of systems that are more or less sustainable, with a special focus on the Proctor Creek watershed.

2. Your role in a big picture: *Students will be able to describe how their actions impact the sustainability of communities.* The course will span multiple scales, from the hyper-local (personal, GT) to the global.

3. Engagement skills and humility: *Students will begin to develop and demonstrate skills needed to work effectively in a community.* This objective will be met via community engagement principles and practicing community engagement methods.

4. Communication: *Students will be able to communicate effectively with the public about creating sustainable communities.* The course will include a culminating module on documenting and communicating learning experiences, suitable for audiences outside the class.

5. Ethics of sustainable community development: *Students will develop an awareness of the ethical issues that arise in sustainability and sustainable community development, as well as an ability to think through the ethical implications of decision making when tradeoffs are required.* Each unit will include ethics topics including environmental justice, the ethics of "helping", community listening and control over destiny, who decides for a community and ethics in practice.

READINGS:
Book (used in part): "Engineering and Sustainable Community Development" by Juan C. Lucena, Jen Schneider, Jon A. Leydens, available for free download here:
http://www.morganclaypool.com/doi/abs/10.2200/S00247ED1V01Y201001ETS011

Articles, web sites, etc: We will make these available under Resources on t-square. (See list at the end of this document.)

INSTITUTE APPROVED AND OTHER ABSENCES: Individual students may make requests for Institute Approved Absences. The guidelines and deadlines that can be found at http://www.registrar.gatech.edu/students/formlanding/iaabsences.php apply. Students should discuss these and other planned absences (e.g. due to major religious observances) with the instructors as soon as possible after the beginning of an academic term. Work missed for these other planned absences may be made up at the discretion of the instructors; students are always allowed to make up for the work missed due to institute-approved absences.

ADAPTS: The Office of Disability Services assists students self-identifying as having a disability to obtain reasonable accommodations. Documentation of disability is required to determine appropriate accommodations or modifications that may be helpful on campus. See http://www.adapts.gatech.edu/

ACADEMIC INTEGRITY: If you quote, paraphrase, or summarize information in your written assignment that you originally obtained from a written or a verbal source, this source reference should be cited in your text. Questions about appropriate forms of citation can be asked of the course instructor or the reference staff at the library. You should become familiar with the provisions of the Georgia Tech academic honor code and the policies governing violations of the honor code, both published in the Georgia Tech course catalog. For more information, see http://www.honor.gatech.edu.

GRADING: Late assignments will not be accepted unless you arrange with the instructor in advance of the due date. Final grades are based on grades for written assignments, participation in class discussions, a project and in-class work. See the following proportion:

Class participation (attendance and active participation): 20%
Reading reflections: 25% total
Other assignments: 30% total
      Examples: Visual anthropology exercise, Field observation exercise, Personal water audit
Community event participation and writeup: 10%
Project: 15%
      Breakdown: Initial brief, Expert interview, Revised brief, Final deliverables

GRADING SCALE: 70-79=C; 80-89=B; 90-100=A

CLASS PARTICIPATION: Attendance is required. This is a lecture and discussion course. Student participation will be an important contributor to actively learning and learning from each other. Class participation will be evaluated as follows. Students will be given participation grades at the 5 week and 10 week marks so they know where they stand:

100%: always attend, participating often (at least once every other class), demonstrate mastery of relevant readings and contribute new ideas and perspectives to discussions and exercises
90%: always attend, participating regularly and demonstrate knowledge of relevant readings
80%: always attend but only occasionally participate
70%: attendance irregular and/or participation very rare