College of Engineering, Wayne State University

STE/CHE 6100 – INTRODUCTION OF SUSTAINABLE ENGINEERING
Fall 2016

Credit Hours: 3
Lectures: 4:00 - 5:20 pm, T & Th
Classroom: 0043 MANO
Office Hours: 10:30 - 11:30 am, T & Th
Instructor: Dr. Yinlun Huang
Office: 1117 Engineering
Phone: (313) 577-3771
E-mail: yhuang@wayne.edu

TEXTBOOK

REFERENCE BOOKS AND MATERIALS
• Sustainable Development in Practice: Case Studies for Engineers and Scientists, by A. Azapagic and S. Perdan (eds.), Wiley-Blackwell, 2011.
• References on different topics as supplementary materials.

COURSE OBJECTIVES
The course is designed to introduce the basic concepts of sustainability, address challenging engineering sustainability issues, present the fundamentals of engineering sustainability, learn basic methods for sustainability assessment, analysis, and decision making, help students develop skills of analyzing sustainability problems appeared in industries, and guide students to investigate real-world problems for solutions for sustainable development. Sustainability related engineering tools will be introduced as well. The course is also featured by various opportunities for comprehensive discussions and extensive communications among students and with engineering faculty and industrial experts.

MAIN TOPICS
• Economic globalization and opportunities for engineering sustainability
• Environmental laws and regulation
• System modeling and design for sustainability
• Sustainable manufacturing and supply chain
• Material sustainability
• Energy and water sustainability
• Sustainability metrics, assessment, and decision making
• Life cycle analysis

COURSE ACTIVITY AND GRADING POLICY
• Homework – 20%. Sets of exercise problems will be assigned.
• Report and class presentation – 20%. A number of technical reports (e.g., subject-based literature survey) and topic-focused student oral presentation will be assigned.
- Exam – 40%. Two open book/open notes exams will be arranged.
- Term project – 20%. A term project will be executed throughout the semester. Project topics will be either assigned by the instructor or proposed by students through discussion with the instructor.

DROPPING OR WITHDRAWING FROM CLASSES
Students must drop classes via the Web by logging into Pipeline (http://pipeline.wayne.edu). If a student has a hold and needs help dropping a class then they should send an e-mail request from their WSU e-mail account to registration@wayne.edu with the appropriate course information. Students may drop a class (for fifteen week classes) through the end of the fourth week of class. Classes that are dropped do not appear on the transcript.

Beginning the fifth week of class students are no longer allowed to drop but must withdraw from classes via Pipeline. It is the student’s responsibility to request the withdrawal. The withdrawal period for full-term classes ends at the end of the tenth week of the term. See the Academic Calendar for specific information on when the withdrawal period ends: http://reg.wayne.edu/students/calendar.php

EDUCATIONAL ACCESSIBILITY SERVICES
If you feel that you may need an accommodation based on the impact of a disability, please feel free to contact the instructor privately to discuss their specific needs. Note that the Office of Educational Accessibility Services (EAS) coordinates reasonable accommodations for students with documented disabilities. The Office is located in 1600 David Adamany Undergraduate Library, phone: 313-577-1851 (Voice) / 577-3365 (TTD).

POLICY ON CHEATING
Cheating is defined by the University as “intentionally using or attempting to use, or intentionally providing or attempting to provide, unauthorized materials, information, or assistance in any academic exercise.” Evidence of fabrication or plagiarism, as defined by the University in its brochure Academic Integrity Policy, will result in downgrading for the course. Students who cheat on any submitted assignment or during any examination may be assigned an “F” grade immediately for the course.

ACADEMIC INTEGRITY POLICY
Wayne State University is committed to the highest standards of academic integrity. You are expected to conduct yourself in accordance with these standards. To the extent that this course relies on project reports and independent research papers, be especially aware of proper attribution and citation standards to avoid even the appearance of plagiarism. Per the Student Code of Conduct, any violations of academic integrity will be handled via a combination of downgrading (up to and including failing the course) and prosecution via the Dean of Students and College of Engineering's Judicial Officer, which can result in permanent transcript notations or even expulsion from the University. Be sure you are familiar with the material on the following links: http://doso.wayne.edu/student-conduct-services.html.