CIVE 210 – SUSTAINABILITY IN CIVIL ENGINEERING
Summer 2016 (201605)

INSTRUCTOR
Dr. C. Valeo
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OFFICE HOURS
Days: TBA
Time: TBA
Location: EOW 543

PREREQUISITES: CHEM 101 or 150; and CSC 111 and MATH 100; PHYS 110 and 111, or 112, or 122 and 125.

LECTURE DATE(S):
Section: A /CRN30108
Time: 11:30 am-12:30 pm
Days: T,W, F
Location: ECS 116

TA NAME:
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E-MAIL:

REQUIRED TEXT
Title: Environmental Engineering
Author: JR Mihelcic and JB Zimmerman
Publisher/Year: Wiley Press/2013

OPTIONAL TEXT
Title: Sustainable Engineering
Author: DT Allen and DR Shonnard
Publisher: 2012

COURSE OBJECTIVES:
Principles of sustainable design in engineering systems, manufacturing, infrastructure, transportation, communications, and community development; design for the environment and sustainability metrics; introduction to life cycle assessment framework, methods, and tools. Evaluation of sustainable technologies from technical, economic, environmental and social perspectives using life cycle analysis. Environmental impact assessments, environmental audit protocols and plans, pre-assessment planning and preliminary assessment of contaminated sites, site investigation, remedial planning and design. Green design case studies.

LEARNING OUTCOMES: At the end of this course, students will be able to:
- Understand the environmental Impact Review Process in British Columbia
- Calculate chemical concentrations and particle concentrations in air and water
- Apply mass balance principles, understand first order kinetics and how temperature affects reaction rates
- Differentiate between batch reactors, completely mixed flow reactors and plug-flow reactors
- Use the law of conservation of mass and apply it to a problem and determine if steady or non-steady state
- Distinguish exponential, logistic and monod models of population growth; identify and use them properly
- Identify and use the appropriate model to calculate changes in population as well as carrying capacity
- Understand risks, hazards and what is entailed in a risk assessment.
- Understand the tools available for sustainability metrics and life cycle analysis as well s their limitations

ASSESSMENTS
4 Tests
Final Project

WEIGHT
% 60
% 40

DATE
TBA (See course schedule)
Last Day of Class
PROJECTS:
Details on the projects including presentation schedule and format will be distributed in class and available on the CourseSpace site on an ongoing basis.

NOTES:
Coursework Mark Appeals: All marks must be appealed within 7 days of the mark being posted.
Attendance: We expect students attend all lectures. It is entirely the students’ responsibility to recover any information or announcements presented in lectures from which they were absent.
Electronic Devices: No unauthorized audio or video recording of lectures is permitted. Calculators are only permitted for examinations and tests if explicitly authorized and the type of calculator permitted may be restricted. No other electronic devices (e.g. cell phones, pagers, PDA, etc.) may be used during examinations or tests unless explicitly authorized.
The final grade obtained from the above marking scheme for the purpose of GPA calculation will be based on the percentage-to-grade point conversion table as listed in the current Undergraduate Calendar.

COURSE LECTURE NOTES
Unless otherwise noted, all course materials supplied to students in this course have been prepared by the instructor and are intended for use in this course only. These materials are NOT to be re-circulated digitally, whether by email or by uploading or copying to websites, or to others not enrolled in this course. Violation of this policy may in some cases constitute a breach of academic integrity as defined in the UVic Calendar.

GENERAL INFORMATION
Note to Students:
Students who have issues with the conduct of the course should discuss them with the instructor first. If these discussions do not resolve the issue, then students should feel free to contact the Chair of the Department by email or the Chair’s Secretary to set up an appointment.

“Attendance
Students are expected to attend all classes in which they are enrolled. An academic unit may require a student to withdraw from a course if the student is registered in another course that occurs at the same time....
An instructor may refuse a student admission to a lecture, laboratory, online course discussion or learning activity, tutorial or other learning activity set out in the course outline because of lateness, misconduct, inattention or failure to meet the responsibilities of the course set out in the course outline. Students who neglect their academic work may be assigned a final grade of N or debarred from final examinations.
Students who do not attend classes must not assume that they have been dropped from a course by an academic unit or an instructor. Courses that are not formally dropped will be given a failing grade, students may be required to withdraw and will be required to pay the tuition fee for the course.” UVic Calendar, (2015) http://web.uvic.ca/calendar2015-09/FACS/Unin/UARe/Atte.html

Accommodation of Religious Observance (AC1210)
http://web.uvic.ca/calendar2015-09/GI/GUPo.html

Discrimination and Harassment Policy (GV0205)
http://web.uvic.ca/calendar2015-09/GI/GUPo.html

Faculty of Engineering, University of Victoria Standards for Professional Behaviour
“It is the responsibility of all members of the Faculty of Engineering, students, staff and faculty, to adhere to and promote standards of professional behaviour that support an effective learning environment that prepares graduates for careers as professionals....”

You are advised to read the Faculty of Engineering document Standards for Professional Behaviour which contains important information regarding conduct in courses, labs, and in the general use of facilities.
http://www.uvic.ca/engineering/current/undergrad/index.php#section0-23

Cheating, plagiarism and other forms of academic fraud are taken very seriously by both the University and the Department. You should consult the Undergraduate Calendar for the UVic policy on academic integrity.

Policy on Academic Integrity
http://web.uvic.ca/calendar2015-09/FACS/Unin/UARe/PoAcI.html