**Sustainability by the Numbers (TCORE 102E)**

**Autumn 2015 Syllabus**

Instructor: Jim Gawel, Associate Professor of Environmental Chemistry and Engineering

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Lecture: Mon/Wed/Fri 9:30 AM-10:50 AM, TLB 109

Office Hours: Monday 11:00 AM-12:00 PM in SCI 216

Wednesday 8:30 AM-9:30 AM in SCI 216, or by appointment or e-mail

Course Website: <https://canvas.uw.edu/courses/993381>

Required Materials:

Notebook

Calculator or calculator app

Helpful Reference Texts:

Ebest, S. B., G. J. Alred, C. T. Brusaw, and W. E. Oliu. 2003. *Writing from A to Z: The Easy-to-Use Reference Handbook (4e)*. McGraw-Hill: Boston, MA, 517 pp.

Liengme, B. V. 2002. *A Guide to Microsoft Excel 2002 for Scientists and Engineers (3e)*. Butterworth-Heinemann: Woburn, MA, 314 pp.

McMillan, V.E. 2001. *Writing Papers in the Biological Sciences (3e)*. Bedford/St. Martin’s: Boston, MA, 207 pp.

# Core

# The Core program consists of a coordinated series of courses that represent the various disciplines in the university. This course, along with the others in your cohort, fulfills one of the university’s general education requirements in each of the areas of knowledge plus composition. The courses are designed to both support and challenge you to develop the critical thinking, writing, research, and analytical skills you’ll need at UWT while introducing you to relevant topics in the social sciences, humanities, and sciences.

# Course Description

In this course we will apply a combination of science, engineering and social science approaches to analyze sustainability at home, on campus and in the local region. This course will be very “hands on” and will require your participation to be successful. We will incorporate data collection in the field and the lab, guest lectures, field trips, and the critical analysis of published literature. Assignments will be project-based and will often require working in groups.

# Course Learning Objectives

In this course, students will:

1. improve their understanding of sustainability from social, environmental and economic viewpoints;
2. learn techniques for modeling complex systems and solving problems;
3. develop skills for finding information, collecting data, making estimations, stating assumptions, and interpreting results;
4. improve their abilities to make arguments based on their own data and published literature;
5. strengthen their abilities to present information in oral, visual and written forms.

# Class Requirements

1. ***Investigative projects*** will be discussed in class. Assignments will be based on collected data, topics discussed in readings and lectures, and on related subjects that may require outside investigation (e.g. library or Internet searches). These projects may include calculations, writing, video production, etc. Late assignments will be penalized 10 pts/day late. Due dates and times will be strictly enforced unless a suitable reason is discussed with me at least two weeks prior or a grave family/personal crisis arises.
2. ***Class participation –*** As this course relies heavily on class participation, pre-class work, group work, and other forms of student involvement, class participation is a significant portion of your grade. Class participation may include in-class and electronic (via Canvas) discussions, in-class exercises, quizzes, and more. All participation assignments will be described in detail in class. Many of these assignments will be used during class time on the date due, so late assignments will receive no credit.
3. ***Extra Credit Assignments*** – A goal of this class is to expose you to lots of new ideas, resources, opportunities, etc., and so I will regularly announce events that I believe will add to your educational experience, but which cannot be completed during class time. Extra credit will be awarded for attending these events and submitting a one-page reflection on the event.

# Grades

Your final grade will be calculated using the formula below and the attached UW Grade Schedule. Percentage and letter grades will be converted to a UW decimal grade using the table below.

Investigative Projects 60%

Class Participation 40%

# UW Grade Schedule

Letter Percentage Grade UW decimal grade

|  |  |  |
| --- | --- | --- |
| **A** | **91-100** | **4.0** |
| **A-** | **88-90** | **3.8** |
| **B+** | **85-87** | **3.4** |
| **B** | **81-84** | **3.1** |
| **B-** | **78-80** | **2.8** |
| **C+** | **75-77** | **2.4** |
| **C** | **71-74** | **2.1** |
| **C-** | **68-70** | **1.8** |
| **D+** | **65-67** | **1.4** |
| **D** | **61-64** | **1.1** |
| **D-** | **50-60** | **0.8** |
| **E** | **< 50** | **0.0** |

**Class Schedule (draft)**



**Inclement Weather [**<http://www.tacoma.uw.edu/campus-safety/uw-alert>**]**

Call 253-383-INFO or check the UW Tacoma homepage to determine whether campus operations have been suspended or delayed. If not, but driving conditions remain problematic, call the professor's office number. This number should provide information on whether a particular class will be held or not, and/or the status of pending assignments. If the first two numbers have been contacted and the student is still unable to determine whether a class(es) will be held, or the student has a part-time instructor who does not have an office phone or contact number, call the program office number for updated information.

NOTE: It is important to remember that safety should always be considered when deciding whether it is advisable to attend classes during periods of inclement weather. I live close to campus and it is sometimes difficult for me to determine the state of the roads outside of Tacoma, therefore please err on the side of caution if the weather turns nasty. Please e-mail me or leave voicemail if you cannot make it in due to inclement weather.

**Disability Support Services (Office of Student Success):** The University of Washington Tacoma is committed to making physical facilities and instructional programs accessible to students with disabilities. Disability Support Services (DSS), located in MAT 354, functions as the focal point for coordination of services for students with disabilities. If you have a physical, emotional, or mental disability that "substantially limits one or more major life activities [including walking, seeing, hearing, speaking, breathing, learning and working]," and will require accommodation in this class, please contact DSS at (253) 692-4508, email at [dssuwt@uw.edu](mailto:dssuwt@uw.edu), [uwtshaw@uw.edu](mailto:uwtshaw@uw.edu) or visit [www.tacoma.uw.edu/dss](http://tacoma.uw.edu/dss)for assistance.

**Teaching and Learning Center:** The Teaching and Learning Center (TLC) offers free academic support for students at all levels. We offer one-on-one consultations and group workshops in writing, math, statistics, science, and Spanish. We also work with students on questions about English grammar & vocabulary, reading, and learning strategies. We are located in Snoqualmie 260 and online. Our schedules for appointments and drop-in visits are posted on our website at [www.tacoma.uw.edu/tlc](http://www.tacoma.uw.edu/tlc). For special needs or subject tutoring requests, please email [uwtteach@uw.edu](mailto:uwtteach@uw.edu)or call (253) 692-4417.

**Campus Safety Information**

**Escort Service:** Safety escorts are available 24 hours a day, 7 days a week, there is no time limit. Call the main office line at 253-692-4416.

**In case of a fire alarm:** During an emergency evacuation, take your valuables **ONLY** if it is safe to do so. You could put yourself or someone else at risk by delaying your exit. Plan to return to class once the alarm has stopped. Do not return until you have received an all-clear from somebody "official," the web or email.

**In case of an earthquake:** DROP, COVER, and HOLD. Once the shaking stops, take your valuables and leave the building. Do not plan to return for the rest of the day. Do not return to the building until you have received an all-clear from somebody "official," the web or email.

For more information: <http://www.tacoma.uw.edu/uwt/administrative-services/campus-safety> and <http://www.washington.edu/safecampus/uwt/>

**Plagiarism:** A major part of your experience at UW Tacoma will be reading, synthesizing, and using the knowledge and ideas of others. To plagiarize is to use the ideas––or unique phrasing of those ideas––without acknowledging that they originate from someone or someplace other than you. Attributing where you get your information builds your own authority to speak on that topic and provides valuable backing to the arguments you make. Attribution also distinguishes your ideas and words from those of others who came before you. At the University of Washington, plagiarism is a violation of the student conduct code, and the consequences can be serious. Though citing, quoting, and paraphrasing can be confusing at first, it is essential for your success at UWT that you familiarize yourself with these important conventions of academic writing. Additionally, plagiarism can be understood differently in various disciplines. For instance, the ways in which one summarizes others’ ideas in texts, or attributes information from texts in one’s own paper, are not the same in the sciences as they are in the humanities, or the social sciences. This means it is vital that you understand the specific expectations and guidelines for writing that will help you avoid plagiarizing in this class. If you have questions about what amounts to plagiarism, you are strongly encouraged to seek guidance from faculty and the Teaching and Learning Center as soon as possible. For more information, please refer to: <http://www.tacoma.uw.edu/uwt/enrollment-services/academic-honesty> and <http://www.tacoma.uw.edu/counseling/>

**Counseling Center (Office of Student Success):** The Counseling Center offers short-term, problem-focused counseling to UW Tacoma students who may feel overwhelmed by the responsibilities of college, work, family, and relationships. Counselors are available to help students cope with stresses and personal issues that may interfere with their ability to perform in school. The service is provided confidentially and without additional charge to currently enrolled undergraduate and graduate students. To schedule an appointment, please call (253) 692-4522, email [uwtshaw@uw.edu](mailto:uwtshaw@uw.edu) , or stop by the Student Counseling Center (SCC), located in MAT 354. Additional information can also be found by visiting [www.tacoma.uw.edu/counseling](http://tacoma.uw.edu/counseling).

**Library:** The UW Tacoma Library provides resources and services to support finding resources for your assignments. We guide students through the research process, helping you learn how to develop effective strategies and find and evaluate appropriate resources. In addition to research and instructional support, we manage course reserves and print and digital collections and provide spaces for group and individual study. For assistance or more information, visit our service desks in SNO and TLB, or our website, <http://www.tacoma.uw.edu/uwt/library>.

**Incomplete:** <http://www.washington.edu/students/gencat/front/Grading_Sys.html#I>

An Incomplete is given only when the student has been in attendance and has done satisfactory work until within two weeks of the end of the quarter and has furnished proof satisfactory to the instructor that the work cannot be completed because of illness or other circumstances beyond the student's control. A written statement of the reason for the giving of the Incomplete, listing the work which the student will need to do to remove it, must be filed by the instructor with the head of the department or the dean of the college in which the course is given.

**Email Policy:** [Policy on the use of email at UW Tacoma](http://www.tacoma.uw.edu/information-technology/uw-tacoma-email-policy)

**Electronic Devices:** Electronic devices (including, but not limited to, cell phones, tablets and laptops) may only be used in the classroom with the permission of the instructor. Activities that are not relevant to the course, such as checking/ sending email, playing games and surfing the web, are considered disruptive activities when class is in session.

**Distribution of Student Tests and Papers:** I will usually return assignments and papers individually in class. However, this is not possible at the end of the quarter. Papers will be held until the end of the next quarter, so please make an appointment to pick them up before then. Papers and grades cannot be e-mailed to students or given out to any other representative due to privacy laws. If you would like your work to be mailed to you after the end of the quarter, you must provide me *in person* with a self-addressed, stamped envelope (10”x13”). *Make sure to provide enough postage for mailing your work.* Remember UWT students often need papers for a degree portfolio or as writing examples when applying for jobs later, so keeping all your papers across your career at UWT is a good idea.